

**UNIVERSITY LIBRARY SERVICES AND ACADEMIC SUCCESS OF STUDENTS:
A CASE STUDY OF FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI,
NIGERIA**

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ABSTRACT: *This research is a venture into a study of the impact of some selected library services on the academic success of students of the Federal University of Technology, Owerri, Nigeria with a view to establish if there exists any relationship between specific library services and academic performance of students. 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 Internet services (3.33), Selective dissemination of Information SDI(2.93), and circulation services(2.97) were above average (2.5) with reference services(2.46) alone being below average. However, only Internet Services($R=0.880$ p -value= $0.049 < 0.05$) 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 to ensure the sustenance of internet and circulation services as they help students achieve higher test scores.*

KEYWORDS: Academic, Internet, Library, Services, Success

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 have access to a well resourced, well staffed library (Lance, 2005).

This research will help reveal the effects of specific library services on students' academic success, their level of impact on students' success and factors that hinder the utilization of these services by students. In so doing, this study will unravel/expose to the library staff those specific library services that have excellent positive impact on students' academic success. With this, library staff can put in more oomph to help students achieve academic success since this is one of the major things the university library is known for. Furthermore, library management will be guided in their decision of possible facilities and resources that will help in enhancing students' academic success.

This study is apt as no similar research has been carried out to unravel the effect of specific library services on students' academic success in Federal University of Technology Owerri. In the case of the Federal University of Technology, Owerri library, some of the library services provided include; Information and Communication Technology (ICT) services, Circulation services, embedded librarian services, Selective dissemination of information, Use of library training programs etc. However no research has been carried out or put in place by FUTO library that help students to achieve high test scores. It is against this background that this study was conducted.

REVIEW OF RELATED LITERATURE

Information and Communication Technology

Library and information services are fundamental to the goals of creating, disseminating, optimally utilizing and preserving Knowledge. They are instrumental in transforming an unequal society into an egalitarian, progressive knowledge-based society. Developments in information communication technology (ICT) have enabled libraries to provide access to all and also bridge the gap between the local, the national and the global society.

Perhaps the most significant factor affecting the role of school libraries and school librarians in relation to student achievement is the explosion of information, particularly in relation to digital resources that have taken place in recent years. Given the vast volumes of information available, the rapidly obsolete nature of much of these information and the questionable quality

of much that are available on the Internet, the role of the school librarian has arguably become even more important than in the past.

Todd (2001a) describes the new information environment as complex and fluid; connective and interactive; and no longer constrained by time and space. In other words, information can be accessed at anytime and or from anywhere. Fitzgibbons (2000) suggests that computer-assisted instruction and computer-based information databases such as CD-ROM encyclopaedias have 'revitalized' the use of libraries. School libraries need to provide better access to these resources and to ensure that students are equipped with the necessary information literacy skills to be able to access and evaluate critically the information they locate. Lance (2000c) points out that the critical factor in relation to the new information and communications technologies (ICTs) such as CD-ROM, video and computer software, is neither the quantity of software programs nor the frequency of computer use but how the programs and computers are being used.

The changing broader context has inevitably had an impact on the nature of the work being done by teacher librarians and the role of libraries in student academic pursuit. In an age of vastly increased information production and ever more sophisticated technological means of accessing this information, and in a world in which intellectual capital has replaced physical capital as the prevailing currency in the 'knowledge society', the school librarian through his/her expertise in 'searching and locating information on the Internet, incorporating digital information on CD-ROMs in the teaching and learning program, and creating support systems such as databases and setting up local area networks within the school community' (AEU 2000) have assumed a pivotal role in preparing students to become lifelong learners and astute evaluators of information. Welch and Braybrook (2001) noted that the advent of electronic access to information "is transforming the concept of collection and the physical entity of the library itself". Such a paradigmatic shift in the profession, they suggest, needs "a different approach to the measurement of worth and value of school libraries". One of the conclusions drawn from their survey was that the whole context of school libraries services is changing and that 'the collection of data has to be allied to an educational outcome rather than just a benchmark or standard'.

Selective Dissemination of Information (SDI) services

Selective Dissemination of Information (SDI) was originally a phrase related to library and information science. Today, S.D.I. refers to tools and resources used to keep a user informed of new resources on specified topics. The basic concept of SDI consists of matching of the information with the interest of the readers. SDI is based on the concept of Personal service. . according to Purnima, (2016), SDI is that service within an organization which concerns itself with the channeling of new items of information from whatever source to those Points within the organization where the probability of usefulness with current work or interest is high. In other words, selective dissemination of information (SDI) is an advanced kind of service directed towards individuals. This is a highly personalized service.

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.
2. To identify the library services mostly utilized by the students of FUTO.

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.

DISCUSSION 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:

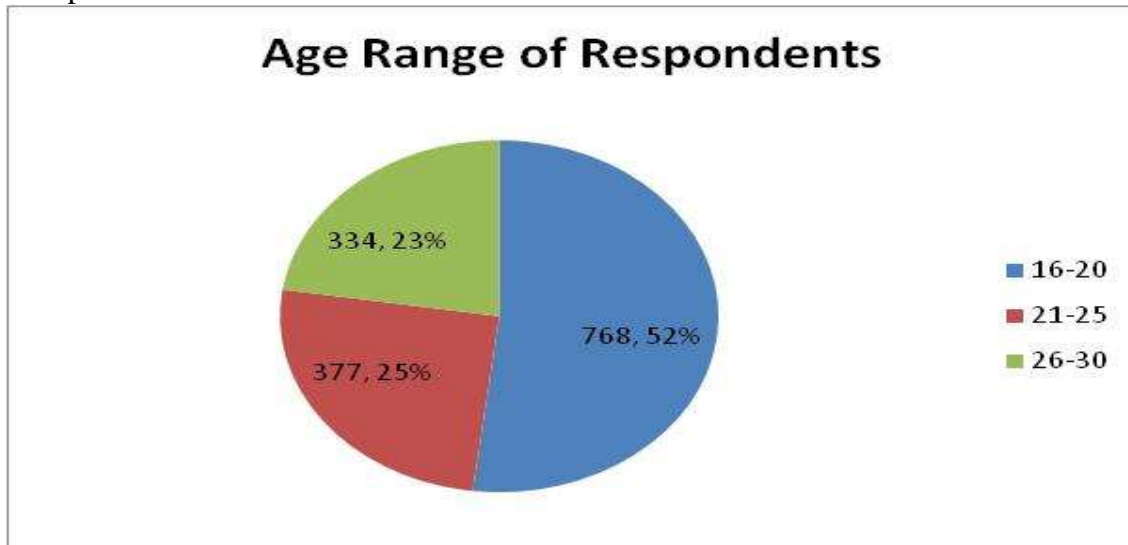
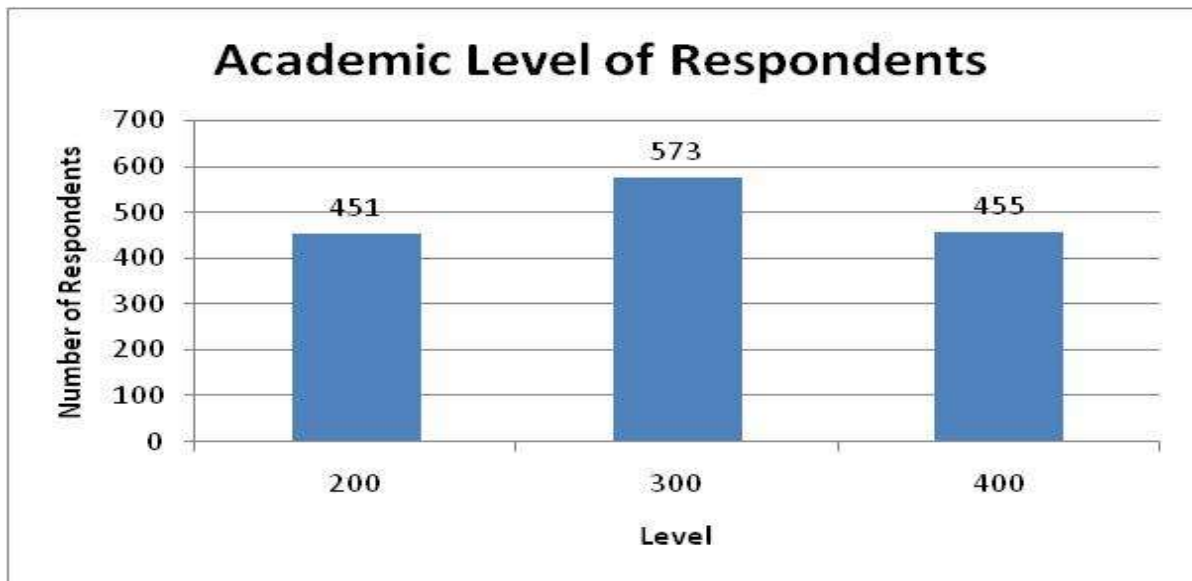


Figure 1: Age Range of Respondents

Table 2: Academic Level of Respondents

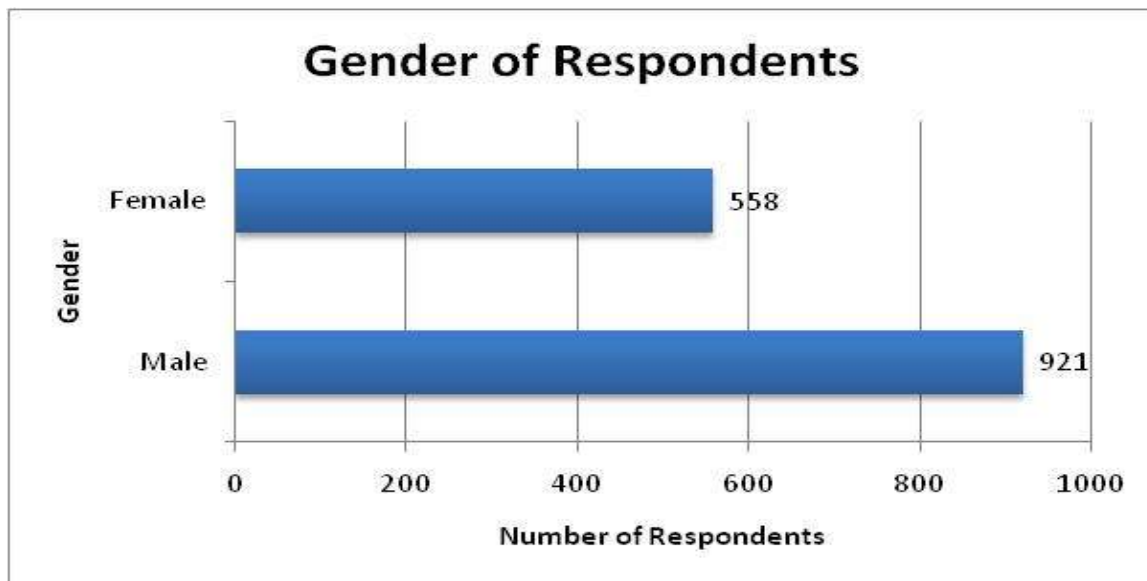
Level	Frequency	Percentage (%)
200	451	30
300	573	39
400	455	31
TOTAL	1479	100

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: Library Services mostly utilized by students.**

S/N	Item	No. of responses	Percentage of Respondents (%)
1	Internet Services	1289	87
2	Book Loan	1254	85
3	Reference Enquiries	781	53
4	Reserve collections	771	52
5	Social Media Services	560	38
6	Embedded Librarian Services	233	16
7	Photocopying	1011	68
8	Bindery Services	20	1

This Table 4 reveals that internet services was found to rank the highest 1289 (87%) as the services the respondents mostly utilize, followed by book loan 1254(85%), photocopying 1011 (68%) reference enquiries 781 (53%) and reserved collections 771 (52%). Social media services 560(38%), embedded librarian services 233(16%) and bindery services 20(1%) were found to be underutilized by students as reflected in the Table above.

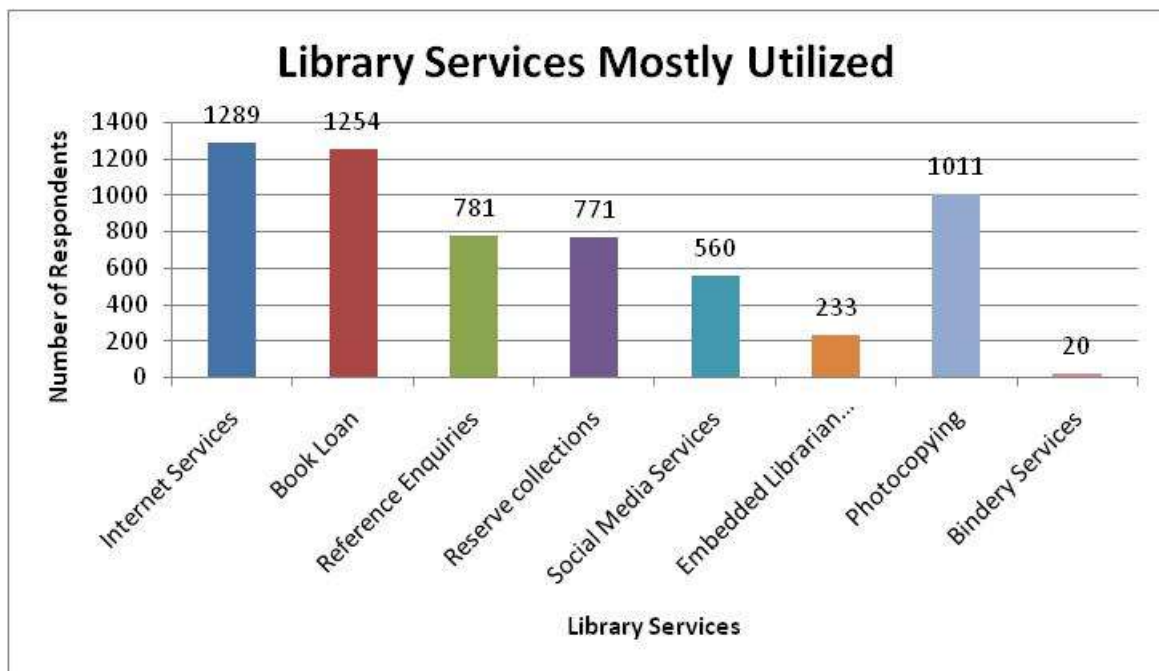


Figure 4: Library Services Mostly Utilized

Table 5: Impact of Internet 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	733	519	109	118	308.54	3.26
2	It helps you in writing your term paper	678	651	113	37	341.94	3.33
3	It helps you present better Practical Reports	863	555	43	18	411.54	3.53
4	it helps you in writing better seminar papers	667	613	87	112	313	3.24
5	It helps you in scoring high in your assessments.	619	726	73	61	352.34	3.29
	Significant Mean						3.33

Source: Field data

The Table above reveals that 1252(85%) of the respondents agreed that internet services provided by FUTO library help them in doing their assignments, while 227(15%) of the respondents were of the negative opinion which gave a mean value of $3.26SD\pm 308.54$ which is above average. When asked if it helps them in writing their term paper 1329(90%) of the respondents were of the affirmative while 150(10%) of the respondents disagreed giving a mean value of $3.33SD\pm 341.94$ which is above average. 1418(96%) of the respondents indicated that the internet services provided by FUTO Library help them in writing better practical reports while 61(4%) of the respondents disagreed which gave a mean value of $3.53SD\pm 411.54$

which is above average. 1280(87%) of the respondents were of the affirmative that internet services provided by FUTO library help them in writing better seminar paper while 199(13%) of the respondents disagreed which gave a mean value of $3.24SD\pm 313$ which is above average. Also when asked if it helps them in scoring high in their assessments, 1345(91%) of the respondents agreed while 134(9%) of the respondents were of the negative opinion which gave a mean value of $3.29SD\pm 352.34$ which is above average. This however gave a significant mean score of 3.33 which shows that internet services provided by FUTO library help students in their academic pursuit.

Table 6: Impact of Selective Dissemination of Information 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	487	458	301	233	122.42	2.81
2	It helps you in doing your term paper	379	671	241	188	216.37	2.84
3	it helps you writing better Practical Reports	586	532	151	210	220.95	3.01
4	it helps you in writing better seminar papers	645	451	166	217	221.52	3.03
5	It helps you in scoring high in your assessments.	513	636	112	218	245.54	2.98
	Significant mean score						2.93

The table above reveals that 945(64%) of the respondents agreed that Selective Dissemination of information services provided by FUTO library helps them in doing their assignment, while 534(36%) of the respondents were of the negative opinion which gave a mean value of $2.81SD\pm 122.42$ which is above average. When asked if it helps them in writing their term paper 1050(71%) of the respondents were of the affirmative while 429(29%) of the respondents disagreed which gave a mean value of $2.84SD\pm 216.37$ which is above average. 1118(76%) of the respondents indicated that the Selective Dissemination of information services provided by FUTO Library helps them in writing better practical reports while 361(24%) of the respondents disagreed which gave a mean value of $3.01SD\pm 220.95$ which is above average. 1096(74%) of the respondents were of the affirmative that Selective Dissemination of information services provided by FUTO library helps them in writing better seminar paper while 383(26%) of the respondents disagreed which gave a mean value of $3.03SD\pm 221.52$ 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 $2.98SD\pm 245.54$ which is above average. This however gave a significant mean score of 2.93 which shows that Selective Dissemination of information services provided by FUTO library helps students in their academic pursuit.

Table 7: Reference Enquiries

	Item	Strongly Agree	Agree	Disagree	Strongly Disagree	SD±	MEAN VALUE
1	It helps you in doing your assignments	223	366	569	321	145.63	2.33
2	It helps you in doing your term paper	513	636	112	218	245.54	2.98
3	it helps you in writing better Practical Reports	412	617	232	218	187.01	2.83
4	it helps you in writing better seminar papers	127	387	513	452	169.81	2.13
5	It helps you in scoring high in your assessments.	118	257	661	443	235.43	2.03
	Significant mean score						2.46

In the Table above, 589(40%) of the respondents agreed that Reference enquiries services by FUTO library help them in doing their assignment, while 890(60%) of the respondents were of the negative opinion which gave a mean value of 2.33SD±145.63 which is below average. When asked if it helps them in writing their term paper, 1149(78%) were of the affirmative while 330(22%) of the respondents disagreed and this gave a mean value of 2.98SD±245.54 which is above average. 1029(70%) of the respondents indicated that the Reference enquiries 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 2.83SD±187.01 which is above average. 514(35%) of the respondents were of the affirmative that Reference enquiries services provided by FUTO library helps them in writing better seminar paper while 965(65%) of the respondents disagreed which gave a mean value of 2.13SD±169.81 which is below average. Also when asked if it helps them in scoring high in their assessments 375(25%) of the respondents agreed while 1104(75%) of the respondents were of the negative opinion which gave a mean value of 2.03SD±235.45 which is below average. This however gave a significant mean score of 2.46 which shows that Reference enquiries services provided by FUTO library do not significantly help students in their academic pursuit.

Table 8: 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 is high.	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: Internet Services provided by FUTO library does not significantly influence the Academic success of the students

Ha: Internet 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	.880 ^a	.775	.700	.05261	.775	10.324	1	3	.049

a. Predictors: (Constant), Internet Services

The Table above depicts a very strong relationship between internet services and Student academic success. It shows that a 0.88 or 88.0% level of coefficient exists 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 (77.5%) since it is very near to 100%, therefore a reasonable level of academic success of students is been determined by the internet 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 70.0% was observed, this normally serves 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	.029	1	.029	10.324	.049 ^b
	Residual	.008	3	.003		
	Total	.037	4			

a. Dependent Variable: Academic Performance

b. Predictors: (Constant), Internet Services

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 10.324 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 Internet Services.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.593	.750		.790	.487
Internet Services	.723	.225	.880	3.213	.049

a. Dependent Variable: Academic Performance

The equation of the regression can thus be written as follows:

$$\text{Academic Success} = 0.593 + 0.880(\text{internet services})$$

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

Hypothesis Two

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

Ha: Selective Dissemination of Information 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	.522 ^a	.272	.029	.09460	.272	1.121	1	3	.367

a. Predictors: (Constant), Selective Dissemination of Information

The Table above depicts a strong but not significant relationship between Selective Dissemination of Information services and Student academic success. It shows that a 0.522 or 52.2% level of coefficient exist between Selective Dissemination of Information 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 (27.2%) since it is very far from 100%, therefore a reasonable level of academic success of students cannot be determined by the Selective Dissemination of Information 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 2.9% 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 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 1.121 with an alpha value of 0.367 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 Selective Dissemination of Information.

On these bases we therefore accept the null hypotheses that say “Selective Dissemination of Information provided by FUTO library does not significantly influence the Academic success of the students.” and reject the Alternate Hypothesis.

Hypothesis Two

Ho: Reference Enquiries provided by FUTO library does not significantly influence the Academic success of the students

Ha: Reference Enquiries 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	.422 ^a	.178	-.096	.10051	.178	.651	1	3	.479

a. Predictors: (Constant), Reference Enquiries

The Table above depicts a moderate but non-significant relationship between Reference Enquiries Services and Student academic success. It shows that a 0.422 or 42.2% level of coefficient exist between Reference Enquiries 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 (17.8%) since it is very far from 100%, therefore a reasonable level of academic success of students cannot be determined by the Reference Enquiries 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 -9.6% 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 0.651 with an alpha value of 0.479 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 Reference Enquiries Services.

On these bases we therefore accept the null hypotheses that say “Reference Enquiries Services provided by FUTO library does not significantly influence the Academic success of the students.” and reject the Alternate Hypothesis.

CONCLUSION

The study found that the significant mean score of Internet services(3.33), Selective dissemination of Information SDI(2.93), are above average (2.5) with reference services(2.46) alone being below average. However only Internet Services($R=0.880$ $p\text{-value}=0.049<0.05$) 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.

RECOMMENDATIONS

Consequent upon the findings of this study and the fact that effective utilization of a library is predicated on greater access to its resources and services, the following recommendations are made to enhance effective students’ use of FUTO Library:

- ✓ Since the library is a growing organism, FUTO library management should continue to harvest a wide spectrum of latest information resources for the use of the ever growing student demand.
- ✓ There should be a steady power supply to ensure an encouraging learning environment and protection of the e- tools for effective service.
- ✓ 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.
- ✓ 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.

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