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APPLICATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTS) FOR ENHANCED SERVICE DELIVERY: THE CASE OF ABIA STATE AND IMO STATE PUBLIC LIBRARIES

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Abstract

This study focused on the application of information and communication technologies (ICTs) for enhanced service delivery in Abia State and Imo State public libraries. Two research questions guided the study. Descriptive survey research design was used for the study. The study was carried out in Abia and Imo state and the population is 182, comprising 77 librarians and 105 library users in the two public libraries sunder study. No sampling was made. Questionnaire was used as the instrument for data collection. Person Product Moment Correlation (PPMC) was used in determining the reliability of the instrument. The result of the reliability test was 0.82, which is high enough for the study. Percentages and Mean scores were used to analyze the research questions. Independent Sample t-test statistics were used to test the hypotheses at 0.05 level of significance. Result revealed that ICTs are utilized in a very low extent for enhanced service delivery in Abia State and Imo State Public libraries, while lack of adequate funding was identified as the major challenge affecting the use of ICTs for enhanced service. This study recommended that ICTs should be provided and used for enhanced service delivery in Abia State and Imo State public libraries, adequate funds should also be provided for enhanced service delivery.

Keywords: Information and Communication Technology (ICT), Public Libraries, Library Service Delivery

Introduction

Historically, traditional library services constituted the sole means of library operations. Services such as acquisition, processing, storage and dissemination of information could only be carried out within the four walls of the library (James and Emmanuel, 2017). However, the integration and use of information and communication technologies (ICTs) in libraries, particularly public libraries will significantly influence enhanced service delivery.

Information and Communication Technologies (ICTs) are widely recognized as one of the most significant advancements modern science and technology have contributed to libraries, particularly public libraries. These technologies represent the integration of computer and communication systems utilized for the generation, organization, management, storage,, and dissemination of information, regardless of geographical constraints. As noted by Agim, Iroeze Osuji and Obasi-Haco (2018), Information and Communication Technologies (ICTs) encompasses any devices and applications employed to access, manage, integrate, evaluate, create and communicate information and knowledge. Such devices include computer systems, audiovisual equipment, scanners, printers, Internet-enabled devices, projectors, etc. Importantly, these technologies have opened a new era for public libraries by enabling users have unrestricted access to information, thereby supporting their learning and research endeavours. That is why Janakiraman and Subramaniah (2015) posited that the contemporary world is characterized by a digital landscape in which ICT has transformed the potentials of libraries and altered traditional library operations. Therefore, the imperative for the application and use of Information and Communication Technologies to enhance service delivery in public libraries cannot be overemphasized.

The use of ICTs has become increasingly significant in libraries, particularly in public libraries, as they are transiting from traditional information resources to digital information formats. This shift implies that library operations, which were once conducted manually, are now being automated to

enhance service delivery to users. The integration of Information and Communication Technologies (ICTs) has become increasingly significant in libraries, particularly in public libraries, as they transit from traditional information resources to digital formats. This shift implies that library operations, which were once conducted manually, are now being automated to enhance service delivery to users (Adebayo & Ahmed, 2018; Tufail, 2019). The use of ICTs refers to the degree to which users engage with and derive benefits from ICT facilities, resources and services to fulfill their informational needs and promote knowledge enhancement. In public libraries, the effective use of ICTs are possible only when they are made available and thus access provided by these libraries for enhanced service delivery. This is to say that the application and use of ICTs is crucial for public libraries in their pursuit to achieve its goals which is to acquire, store, organize, and disseminate information for users benefit. The success of these initiatives and attainment of the aforementioned goals are reliant on the engagement of public library users with ICTs (Yusuf, 2019). Moreover, the use of ICTs through the internet, workgroup, groupware, electronic document management and portals, significantly enhances users' information output. Through ICTs, users can efficiently retrieve, store, share, update and create information.

Despite the numerous benefits associated with Information and Communication Technologies (ICTs) for enhanced service delivery, public libraries continue to face significant challenges. Butcher (2016) observed that the potential of library tasks have not been fully realized due to numerous challenges including power failure, inadequate funds, computer system failure, staff attitude towards use of ICT, lack of ICT policies and shortage of competent staff to manage the ICT facilities. Even in instances where funds and material resources are readily available, libraries are required to invest in training their staff to enhance their proficiency in the application and use of ICTs for enhanced service delivery. These challenges impede the effective application and use of ICTs in many public libraries. Based on the identified gaps, this study aims to examine application and use of Information and Communication technologies (ICTs) for enhanced service delivery in Abia State and Imo State Public Libraries..

Statement of the Problem

Public libraries primarily serve to support individual and self-education, as well as to support formal education across various levels, by offering range of non-fiction resources. They exist to foster reading habits in children and adults through the provision of fiction collections that promote reading. In Nigeria, public libraries are expected to play pivotal role in enhancing self-education by providing access to information resources, especially given the limited opportunities for formal education in institutions of higher learning in the country. However, this expectation is often unmet due to the poor state of facilities in public libraries. The application and use of ICTs in Abia State and Imo State public libraries, have the potential to significantly improve their current situation and making them better positioned to fulfill their societal roles of informing, educating and catering for the recreational needs of their users by providing relevant information resources.

The literature on the application and use of ICTs indicates that public libraries in Abia State and Imo State are not leveraging ICTs as their counterparts in developed countries. Specifically, public libraries appear to be less proficient in the use of these technologies to deliver services to their users compared to academic and special libraries. The consequences of not using ICT in Abia State and Imo State public libraries include restricted users' access to the full range of resources available through newer technologies. This may lead to user dissatisfaction and thus hinder them to achieve self-actualization or their life aspirations. As a result, Abia State and Imo State public libraries may struggle to contribute meaningfully to national development. This study therefore sought to examine the application and use of ICTs for enhanced service delivery in Abia State and Imo State public libraries. The problem of this study in question form is to what extent are ICTs utilized for enhanced service delivery in Abia State and Imo State public libraries?

Purpose of the Study

Specifically, the study sought to examine:

1. extent ICTs are utilized for enhanced service delivery in Abia State and Imo State public libraries;

2. ICT facilities available for enhanced service delivery in Abia State and Imo State public libraries
3. challenges affecting the utilization of ICT for enhanced service delivery in Abia State and Imo State public libraries.

Research Questions

1. to what extent are ICTs utilized for enhanced service delivery in Abia State and Imo State public libraries?
2. What are the ICT facilities available for enhanced service delivery in Abia State and Imo State public libraries?
3. what are the challenges affecting the utilization of ICT for enhanced service delivery in Abia State and Imo State public libraries?

Methodology

Descriptive survey research design was adopted in carrying out this study. Descriptive survey design was considered appropriate for the study because the study collected data from librarians and users that were used to describe and explain the application and use of information and communication technologies (ICTs) in Abia State and Imo State public libraries. The study was carried out in Abia State and Imo State. The population of the study is 182 comprising 77 librarians and 105 library users in the two public libraries under study. No sampling was made. All the 182 population were studied. Questionnaire was used as the instrument for data collection. Person Product Moment Correlation (PPMC) was used in determining the reliability of the instrument. The result of the reliability test was 0.82, which is high enough for the study. Percentages and Mean scores were used to analyze the research questions. Independent Sample t-test statistics were used to test the hypotheses at 0.05 level of significance.

Results and Discussion

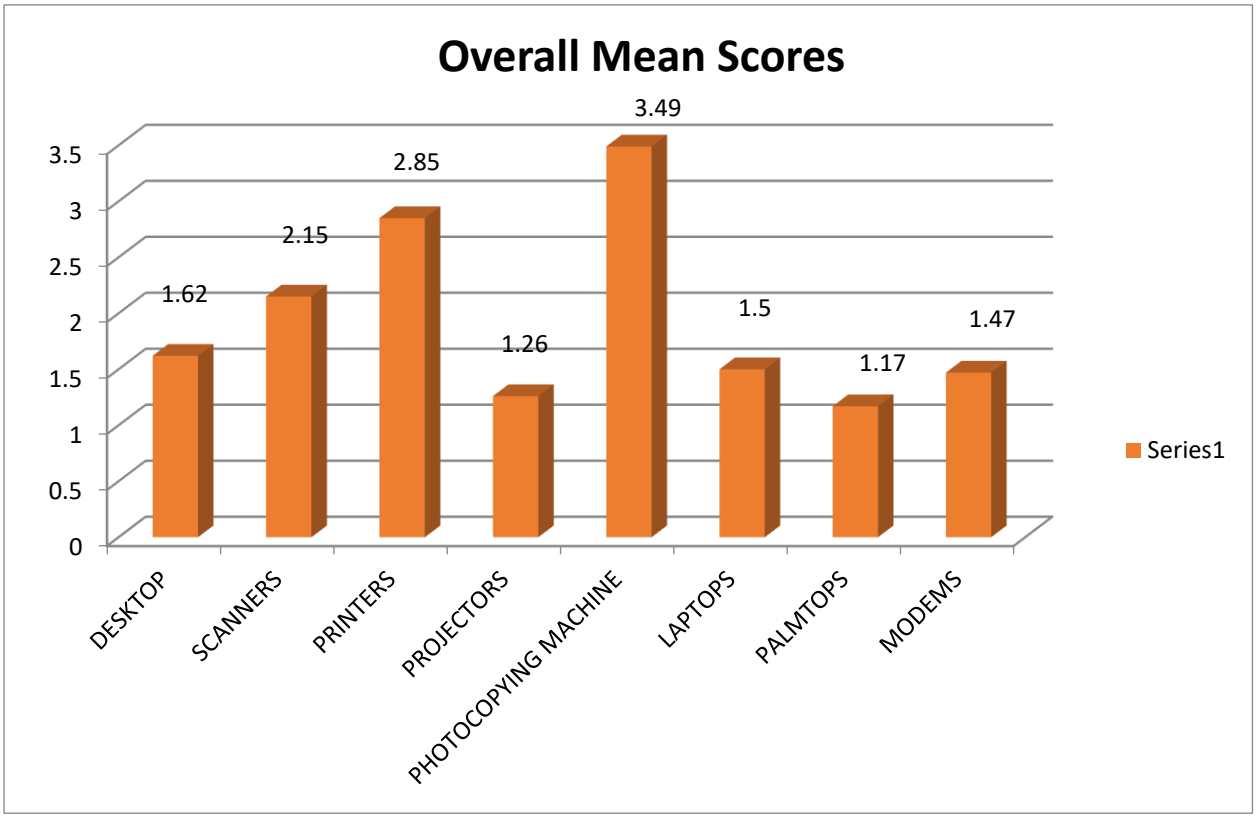
The results of the study are presented in table 1-2 below:

***Research question 1*:** to what extent are ICTs utilized for enhanced service delivery in Abia State and Imo State public libraries?

Table 1: ***Mean rating of responses on extent of utilization of ICTs for enhanced service delivery in Abia State and Imo State public libraries***

S/N	Item Status	Librarians Mean	Librarians Std	Rank	User Mean	User Std	User Rank	Overall	Overall Std	Decision	Overall Rank
1.	Photocopying Machine	3.51	1.033	1	3.46	1.068	1	3.49	1.051	HE	1
2.	Printers	2.46	1.056	2	3.24	1.129	2	2.85	1.093	HE	2
3.	Scanners	1.93	.858	3	2.37	.761	3	2.15	0.810	LE	3
4.	Desktop	1.67	.721	4	1.57	.607	5	1.62	0.664	LE	4
5.	Laptops	1.49	1.033	5	1.50	.704	6	1.50	0.869	LE	5
6.	Modems	1.33	851	6	1.60	.586	4	1.47	0.719	VLE	6
7.	Projectors	1.30	.870	7	1.21	.624	7	1.26	0.747	VLE	7
8.	Palmtops	1.13	.561	8	1.20	.636	8	1.17	0.599	VLE	8
	AVERAGEMEAN	**1.85**			**2.02**			**1.94**			

Figure 1: ***Bar chart showing extent of utilization of ICTs for enhanced service delivery in Abia State and Imo State public libraries***



Source: Microsoft Excel 2007

Table 1 and Figure 1 shows a very low extent of utilization of ICTs for enhanced service delivery in Abia State and Imo State public libraries as revealed by the grand mean score of the listed items by librarians and users (1.94) which is far below the accepted criterion of 2.50.The overall standard deviation that range from .599-1093 shows high variation in librarian and user's responses on the extent of utilization of ICTs for enhanced service delivery in Abia state and Imo state public libraries.

However, result revealed that photocopying machine and printers areutilized to a high extent in these public libraries for enhanced service delivery. This result agrees with Egharevba (2018) whose finding on the extent of ICT use in Nigerian libraries stressed on low extent of ICT use for information service delivery. When ICTs are not utilized in a high extent in the libraries, especially in this 21st centurywhere information has become a global commodity, then it is at their peril. On the other hand, this finding disagrees with Adeniji *et al* (2011) who found out in their study that ICT facilities such as computers, and internet are used in a very high extent by both librarians and users to source for information in various fields of learning. ICT has become an essential factor in determining the worth of every library. That is why Odionye (2016) attested that ICT facilities are agents of information resource. Therefore, Abia State and Imo State public libraries must ensure the application and optimum use of ICTs if they must achieve enhanced service delivery.

Research question 2: What are the ICT facilities available for enhanced service delivery in Abia State and Imo State public libraries?

Table 2: ***Frequency count and percentages on ICT facilities available Abia State and Imo State public libraries***

S/N	ITEMS	ABIA STATE PUBLIC LIBRARY			IMO STATE PUBLIC LIBRARY			TOTAL (%)		
	Computer Facilities	**AU**	**ANU**	**NA**	**AU**	**ANU**	**NA**	**AU**	**ANU**	**NA**
1.	Projectors	•	•	v	•	•	v	0(0.0)	0(0.0)	2(100)
2.	Computers	•	V	•	v	•	•	1(50.0)	1(50.0)	0(0.0)
3.	Scanners	•	•	v	v	•	•	1(50.0)	0(0.0)	1(50.0)
4.	Printers	v	•	•	v	•	•	2(100)	0(0.0)	0(0.0)
5.	Ups	•	V	•	v	•	•	1(50.0)	1(50.0)	0(0.0)
	Total	**1(20.0)**	**2(40.0)**	**2(40.0)**	**4(80.0)**	**0(0.0)**	**1(20.0)**	**5(50.0)**	**2(20.0)**	**3(30.0)**
	Computer Software Resources									
6.	Storage Media	•	•	v	•	•	v	0(0.0)	0(0.0)	2(100)
7.	Online Database	•	•	v	•	•	v	0(0.0)	0(0.0)	2(100)
8.	CD-Roms	•	V	•	•	•	v	0(0.0)	1(50.0)	1(50.0)
9.	Library Application Software	•	•	v	•	•	v	0(0.0)	0(0.0)	2(100)
10.	Internet Connection	v	•	•	•	•	v	1(50.0)	0(0.0)	1(50.0)
	Total	**1(20.0)**	**1(20.0)**	**3(60.0)**	**0(0.0)**	**0(0.0)**	**5(100)**	**1(10.0)**	**1(10.0)**	**8(80.0)**
	Audio- Visual Media/Equipment									
11.	Satellite Connection	•	•	v	•	•	v	0(0.0)	0(0.0)	2(100)
12.	Digital Cameras	•	•	v	•	•	v	0(0.0)	0(0.0)	2(100)
13.	Radio	•	•	v	•	•	v	0(0.0)	0(0.0)	2(100)
14.	Television	v	•	•	v	•	•	2(100)	0(0.0)	0(0.0)
15.	Audiotapes	•	•	v	•	•	v	0(0.0)	0(0.0)	2(100)
16.	DVD/VCD	v	•	•	v	•	•	2(100)	0(0.0)	0(0.0)
17.	Video Tapes	•	•	v	•	•	v	0(0.0)	0(0.0)	2(100)
18.	Photocopier	v	•	•	v	•	•	2(100)	0(0.0)	0(0.0)
	Total	**3(37.5)**	**0(0.0)**	**5(62.5)**	**3(37.5)**	**0(0.0)**	**5(62.5)**	**6(37.5)**	**0(0.0)**	**10(62.5)**
	Communication Media									
19.	Television (intercom)	•	•	V	•	•	v	0(0.0)	0(0.0)	2(100.0)
20.	GSM	•	•	V	•	•	v	0(0.0)	0(0.0)	2(100)
	Total	**0(0.0)**	**0(0.0)**	**2(100)**	**0(0.0)**	**0(0.0)**	**2(100)**	**0(0.0)**	**0(0.0)**	**4(100)**
	GRAND TOTAL (%)	**5(25.0)**	**3(15.0)**	**12(60.0)**	**7(35.0)**	**0(0.0)**	**13(65.0)**	**12(30.0)**	**3(7.5)**	**25(62.5)**

Source: Observational Checklist

AU = Available and in use; ANU = Available but not in use; NA = Not available.

The findings of research question one showed that majority of the ICT facilities are absent in Abia State and Imo State public libraries. But the available and used ICT facilities are Computers, scanners, printers, photocopiers and internet. This is in agreement with Osuchukwu, Obuezie and

Ogwuche (2017) who argued that the role of ICT facilities in library housekeeping is invaluable. Without these ICT facilities, the library will be over-burdened and thus staff will be burdened with operational activities in which using ICT facilities can be made easy. This is why Emmanuel (2015) said that the use of ICT facilities will increase the speed and ease in performing operational services in all the sections of the library most notably in sections like Cataloguing and Classification, Acquisition, Circulation and Serials sections. Hence to attain high level of user satisfaction in the delivery of information services, Abia State and Imo State public libraries must provide and fully integrate ICT facilities. This is due to the changing in information seeking behaviour of users and remote information access from ICT. In other words, availability of ICT facilities will not only improve the services but also smarten Abia State and Imo State public libraries.

Research Question 3: what are the challenges affecting the utilization of ICTs for enhanced service delivery in Abia State and Imo State public libraries?

Table 3: ***Mean rating of responses on the challenges affecting the utilization of ICTs for enhanced service delivery in Abia State and Imo State public libraries***

S/N	Item Status	Lib Mean	Lib Std	Rank	User Mean	User Std	User Rank	Overall	Overall Std	Overall Rank	Dec
1.	Inadequate funding	3.60	.563	3	3.46	.576	1	3.43	.570	1	**SA**
2.	Low level of ICT skills	3.51	.527	4	3.36	.811	2	3.44	.669	2	**A**
3.	Inadequate ICT facilities	3.61	.491	2	3.13	.418	6	3.37	.455	3	A
4.	High tariff in telecommunication	3.65	.506	1	3.02	.492	7	3.34	.499	4	A
5.	Inadequate number of effective internet service providers (ISP)	3.38	1.038	7	3.28	.697	4	3.33	.870	5	A
6.	Epileptic power supply	3.41	.684	6	3.15	.359	5	3.28	.522	6	A
7.	Staff resistance to introduction of ICT in public libraries	3.22	.994	8	3.32	.568	3	3.27	.781	7	A
8.	Lack of capacity/competence	3.43	.994	5	2.96	.530	8	3.20	.762	8	A
	AVERAGE MEAN	**3.48**			**3.21**			**3.35**			

Source: SPSS Version 25 Output

Table 2 shows result on the challenges affecting the utilization of ICTs for enhanced service delivery in Abia State and Imo State public Libraries. Both Librarians and Users (3.53) strongly agree that inadequate funding constitutes the greatest challenge that affects the utilization of ICT for enhanced service delivery in the libraries under study. On the other hand, Librarians (3.60) considered it to be a more serious challenge than users (3.46). This result agrees with Otunla (2016) who stressed that inadequate fund hinders the utilization of ICT in libraries. The implication of this is that Abia State and Imo State public libraries must put in efforts to leverage on funding so as to provide the necessary ICT

facilities needed to satisfy users' information needs and as such improve on the utilization of ICTs for enhanced service delivery especially in this technological driven era.

Test of Hypothesis

The hypothesis formulated for this study was tested using independent sample t-test at 5% level of significance.

Table 3: ***T-test for Mean Rating of Librarians and Users on extent of Utilization of ICTs for enhanced service delivery in Abia State and Imo State Public Libraries***

Item	Status	N	Mean	Std Deviation	T	DF	Sig (2-tailed)	Remark
Photocopying Machine	**Librarians**	62	1.67	.721	-13.809	180	.000	S
	Users	95	3.53	1.029				
Printers	**Librarians**	62	1.93	.858	-3.692	180	.000	S
	Users	95	2.37	.761				
Scanners	**Librarians**	62	2.46	1.056	-4.752	180	.000	S
	Users	95	3.24	1.129				
Desktop	**Librarians**	62	1.30	.870	.855	180	.394	NS
	Users	95	1.21	.624				
Laptops	**Librarians**	62	3.51	1.033	.144	180	.886	NS
	Users	95	3.49	1.040				
Modems	**Librarians**	62	1.49	1.033	-9.816	180	.000	S
	Users	95	3.19	1.261				
Projectors	**Librarians**	62	1.13	.561	-15.463	180	.000	S
	Users	95	3.38	1.213				
Palmtops	**Librarians**	62	1.33	.847	-2.540	180	.012	S
	Users	95	1.60	.586				
Overall	**Librarians**	62	1.86	.340	-15.560	179	.000	S
	Users	95	2.75	.418				

Source: SPSS Version 25 Output

Table 3 shows the t-test for mean rating of Librarians and Users on extent of utilization of ICTs for enhanced service delivery in Abia State and Imo State public libraries. From the table, since p-value (0.000) < 0.05, we reject the Null hypothesis and conclude that there is a significant difference between the mean rating of librarians and users on the extent of utilization of ICT for enhanced service delivery in Abia State and Imo State Public Libraries.

Conclusion

Based on the findings of the study as it relates research question 1-3, the following conclusions are drawn. The application and use of ICTs is necessary in order to achieve library's objective which is

enhanced information service delivery. The status of application and use of ICTs for enhanced service delivery in Abia State and Imo State public libraries was unknown, and therefore became imperative to carry out the investigation. The findings of this study revealed that ICTs are utilized in a very low extent by Librarians and users of Abia State and Imo State public libraries. Most ICT facilities are not available in Abia State and Imo State public libraries. The available facilities include computers, scanners, printers, photocopiers and internet connectivity. However, if majority of ICT facilities are available and in use by Abia State and Imo State public libraries, there will be high tendency in achieving effective service delivery. Both Librarians and Users identified inadequate funding as major challenge affecting the use of ICTs for enhanced service delivery in Abia State and Imo State public libraries. The implication of this study is that utilizing ICT in public libraries will not only enhance effective service delivery, rather make public libraries smarter, and bridge the information gap.

Recommendations

Based on the findings and conclusion, the following recommendations were made:

1. ICTs should be provided for enhanced service delivery in public libraries;
2. Public libraries should always use ICTs to bridge information gap if they must achieve enhanced service delivery;
3. Adequate funds should be provided by the State Government to Public Libraries to enable them acquire necessary ICT facilities for enhanced service delivery.

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Appendix A

Reliability test of the questionnaire using Peason Product Moment Correlation (PPMC) Co-Efficient (r)

S/N	X	Y	X^Z	Y^Z	XY
1	12	11	114	121	132
2	9	7	81	49	63
3	14	10	196	100	140
4	10	12	100	144	120
5.	11	10	121	100	110
6.	14	8	196	64	112
7.	9	6	81	36	54
8.	8	7	64	49	56
9.	11	8	121	64	88
	98	**79**	**1109**	**747**	**875**

Pearson formular

$$r = \frac{Nxy - (x)(y)}{\sqrt{(Nx^2 - (x)^2)(Ny^2 - (y)^2)}}$$

Where

N = The number of items (respondents)
x = The Sum of the scores in x distribution
y = The sum of scores in y distribution
x^2 = The sum of squared scores in x distribution
y^2 = The sum of squared scores in y distribution
= The sum of the products of paired x-y scores

$$r = \frac{(Nxy - (x)(y)}{\sqrt{(Nx^2 - (x)^2)(Ny^2 - (y)^2)}}$$

Where

N = The umber of items (respondents)
x = The Sum of the scores in x distribution
y = The sum of scores in y distribution
x^2 = The sum of squared scores in x distribution
y^2 = The sum of squared scores in y distribution
= The sum of the products of paired x-y scores

$$r = \frac{Nxy - (x)(y)}{\sqrt{(Nx^2 - (x)^2)(Ny^2 - (y)^2)}}$$

$$r = \frac{18x875 - 98x79}{\sqrt{(18x1109 - (98)^2)\,(18x\,(79)^2}}$$

$$r = \frac{15750 - 7742}{\sqrt{(19962 - 9604)\,(13446 - 6241)}}$$

$$r = \frac{8008}{\sqrt{(10358)\,(7205)}}$$

$$r = \frac{8008}{\sqrt{(74629390}}$$

$$r = \frac{8008}{8638.830361}$$

$$r = 0.82$$

Appendix B

Result of Hypothesis Test

Group Statistics					
	Status	**N**	**Mean**	**Std Deviation**	**Std Error mean**
Photocopying Machine	Librarians	62	1.67	.721	.080
	Users	95	3.53	1.029	.103
Printers	Librarians	62	1.93	.858	.095
	Users	95	2.37	.761	.076
Scanners	Librarians	62	2.46	1.056	.117
	User	95	3.24	1.129	.113
Desktop	Librarians	62	1.30	.870	.096
	User	95	1.21	.624	.062
Laptops	Librarians	62	3.51	1.033	.114
	User	95	3.49	1.040	.104
Modems	Librarians	62	1.49	1.033	.114
	Users	95	3.19	1.261	.126
Projectors	Librarians	62	1.13	.561	.062
	Users	95	3.38	1.213	.121
Palmtops	Librarians	62	1.33	.847	.094
	Users	95	1.60	.586	.059
Overall	Librarians	62	1.86	.340	.038
	Users	95	2.75	.418	.042

T-test for mean rating of librarians and users on the extent of utilization of icts for enhanced service delivery

Independent Samples Test									
	Levene's test for Equality of Variances		T-test for Equality of Means						
	F	Sig	T	DF	Sig (2-tailed)	Mean Difference	Std Error Difference	95% Confidence interval of the Difference	
								Lower	Upper

Photocopying Machine	Equal variances assumed	3.859	.051	-13.809	180	.000	-1.859	.135	-2.125	-1.594
	Equal variances not assumed			-14.286	175.929	.000	-1.859	.130	-2.116	-1.602
Printers	Equal variances assumed	.284	.594	-3.692	180	.000	-443	.120	-680	-206
	Equal variances not assumed			-3.648	163.565	.000	-443	.121	-683	-203
Scanners	Equal variances assumed	.042	.837	-4.752	180	.000	-777	.163	-1.099	-454
	Equal variances not assumed			-4.783	176.862	.000	-777	.162	-1.097	-456
Desktop	Equal variances assumed	3.550	.061	.855	180	.394	.095	.111	-124	.314
	Equal variance not assumed			.828	142.938	.409	.095	.115	-132	.321
Laptops	Equal variances assumed	.055	.815	.144	180	.886	.022	.154	-283	.327
	Equal variances not assumed			.144	173.478	.886	.022	.154	-282	.327
Modems	Equal variances	13.119	.000	-9.816	180	.000	-1.702	.173	-2.044	-1.360

	assumed									
	Equal variances not assumed			-10.010	180.000	.000	-1.702	.170	-2.083	-1.367
Projectors	Equal variances assumed	61.417	.000	-15.463	180	.000	-2.246	.145	-2.532	-1.959
	Equal variances not assumed			-16.491	145.376	.000	-2.246	.136	-2.515	-1.977
Palmtops	Equal variances assumed	.247	.620	-2.540	180	.012	-271	.107	-481	-060
	Equal variances not assumed			-2.453	139.488	.015	-271	.110	-489	-053
Overall	Equal variances assumed	3.435	.065	-15.560	179	.000	-895	.058	-1.008	-781
	Equal variance not assumed			-15.899	178.996	.000	-895	.056	-1.006	-784

There is no significant difference between the mean rating of librarians and users on the extent of utilization of ICT in Abia State and Imo state public Libraries.

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Decision Rule:

If P-value<0.05 accept and reject

If P-value>0.05 accept and reject