

# ASSESSMENT OF THE LEVEL OF ICT LITERACY AND UTILIZATION AMONG ACADEMIC AND NON-ACADEMIC STAFF OF THE RIVERS STATE COLLEGE OF HEALTH SCIENCE AND MANAGEMENT TECHNOLOGY, ORO-OWO, RUMUEME, PORT HARCOURT

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**Abstract:** The present study focused on the assessment of the level of information and communication technology (ICT) literacy and utilization among academic and non-academic staff of Rivers State College of Health Science and Management Technology, Port Harcourt. A population of 60 staff participated in the study. An open and closed ended Questionnaire was used to collect data for the study. Data collected were analyzed using simple percentages. Results indicated that computer literacy level of the staff of the college was more than average 20(33.3%) for academic staff and was slightly low 18(30%) for non-academic staff of the college. The institution does not have the required ICT tools for effective teaching and administrative purposes. Recommendations are that, the college management should provide adequate manpower, train and retrain its workers on ICT, establish proper administrative system as well as establishment of functional ICT department.

**Keywords:** Assessment, ICT, Utilization, Computer Literacy.

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## Objectives of the Study

The objectives are thus:

1. To ascertain the computer literacy level of the academic and nonacademic staff of the Rivers State College of Health Science and Management Technology, Port Harcourt.
2. To find out the level of computer utilization in academic and administration by the academic and nonacademic staff of the Rivers State College of Health Science and Management Technology, Port Harcourt.
3. To investigate the constraints of academic and nonacademic staff of the Rivers State College of Health Science and Management Technology, Port Harcourt on ICT utilization.
4. To find out the level of availability and use of ICT among the academic and nonacademic staff of the Rivers State College of Health Science and Management Technology, Port Harcourt.

### Justification of the Study

1. The study will help show if there is slow access to basic ICT equipment, low internet connectivity and computers, and the inadequacies in the use of audiovisual materials and equipments including films, slides, transparencies, projectors, globes, charts, maps, bulletin boards, plus programmed materials, information retrieval systems, and instructional television.
2. The study will help solve the problem of lack of adequate ICTs infrastructure available in the Colleges of health and this has reduced access to ICT instructional material to faculty staff and students.

## 1. INTRODUCTION

### 1.1 Background of the Study

Computer literacy, according to Ughamadu (2008) is the knowledge and ability to use computer technology efficiently. Folajimi, Ejiofor and Folajimi (2008) defined computer literacy as the knowledge and ability to efficiently use computers and information technology with other applications that are associated with computers. The computer as a tool has been exposed and is being utilized in the effective management of education in so many countries (Uvah, 2005). Similarly, Sekiguchi (1998) reported that in Europe more than 80% of Slovenian schools have access to computer for teaching and administrative work and that particularly in United Kingdom, the British government had concluded plans to connect all schools, colleges and Universities, libraries, and as many community centres as possible to the internet by the next budget. Ning (1998) reported that as at 1997, Japan equipped over 94% of her public schools with computer and connected about 10% of them to the internet.

Information and Communication Technology (ICT) has in recent times become appreciated, world over due to its great potentials for all sectors of the society, and especially for education. Reports by (Oladele, 2003; Agih and Epe, 2004) shows that all other sectors of the society depend on the education sub-sector for sustainable development. Education has remained a veritable tool in the quest by nations of the world to attain appreciable level of development. It is therefore the most effective tool for human resource development throughout the world (Ajayi, 2001).

Quality and quantity of human resources available in a country has always been linked to functional education. Education plays major role in human resources development with which a country attains its level of productivity. Now that the world has become a global village through the development of ICT, it is only reasonable that for sustainable development to be attained in Nigeria, the education system must equally brace up the present ICT challenge for it to be relevant in an era of globalization where the free flow of information via the satellite and the internet hold sway in global information dissemination of knowledge (Agih and Joseph, 2008).

Activities of man in this present time revolve around computer education, without which there may be no advancement in research and acquisition of knowledge.

Information Technology (IT) according to Hess and Leal (2001) refers to a computer, auxiliary equipment, software and firm ware (hardware) and procedures, services and related resources. Agih and Joseph (2008) described ICT as any equipment or interconnected system of equipment that is used in the automatic acquisition, storage, manipulation, management, display, switching and transmission of information. It is also described as tools that comprise electronic devices which are utilized for information and communication needs of institutions, organisations, students and individuals. Olorundare (2006) enumerated such electronic devices to include computers, networking, telephone, video, multimedia and internet. Gbadeyan (2005) defined computer as an electronic device which accepts and processes data by following a set of instructions (programmes) to produce accurate and efficient result at high-speed.

The ability to access and effectively utilize information does not seem to be a luxury but a necessity for development. This fact has equally been stressed by Oyebanji (2003) in a related study. It is sad that many developing nations, Nigeria inclusive are not doing much to ensure proper educational use of the computer and ICT. Aduwa-Ogiegbaen and Iyamu, (2005) collaborates this view.

Education holds the key to a better world for Nigeria, and with the new development in education (computer literacy), it means there must be a paradigm shift if our educational system will be relevant in this information age and as a matter of urgency, educational institutions in Nigeria ought to embrace this new challenge as to be better positioned to enhanced sustainable development. (Agih and Joseph, 2008).

As every nation is making concerted efforts to develop the ICT literacy of their citizens, different demands have been placed on education and its management. This has led to the introduction of e-learning, virtual laboratory and video conferencing and so on to improve the quality of learning. In administration, this tool has introduced programmes like Management Information System (MIS), Executive Information System (EIS), the Decision Support System (DSS) for effective and efficient school management (Akukwe, 2003; Uvah, 2005).

A non-computer literate academic and non-academic staff of a college of health will not function effectively in academics and administration without computer use. Their approaches to issues on teaching and administration would be analogue thereby retarding productivity. This study is therefore set to examine computer literacy and utilization among Academic and Nonacademic Staff of The Rivers State College of Health Science and Management Technology, Port Harcourt.

## 1.2 Statement of the Problem

Most teachers and non-teaching staff in Colleges of health do not have the needed experience and competence in the use of computers either for educational or industrial purposes. They also do not have needed skills and knowledge in the use of common computer software.

Another serious challenge facing higher education in Nigeria is the need to integrate new ICT literacy knowledge into academic courses and programs, hence the need to examine computer literacy and utilization among academic and nonacademic staff of the Rivers State College of Health Science and Management Technology, Port Harcourt.

## 2. METHODOLOGY

### 2.1 Research Design

The design of the study is descriptive survey. A descriptive survey is concerned with ascertaining and establishing the status quo, facts or pieces of information at the same time of the research and presenting such facts as they are (Ogomaka, 1992). Similarly, Nwogu (1991) posits that, descriptive surveys are those studies which aim at collecting data and describing in a systematic manner, the characteristics, features and findings about a given population.

### 2.2 Population of the Study

The target populations for this study are 60 healthcare workers between the ages of 25 and above, and are working in Rivers State College of Health Science and Management Technology, Port Harcourt.

### 2.3 Sample Size and Sampling Techniques

Purposive sampling technique which is a type of non-probability or biased sampling was used in this study. It has to do with the use of specific cases which has specific characteristics to be studied. The researcher also used stratified sampling technique, which entails dividing the target population into homogeneous sub-populations into Age, Marital status, level of utilization, Literate level (Educational Background), est. The sample size was determined using Taro Yamene's formula.

Hence, the Taro Yamane's (1967) formula was applied as;

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = sample size sought

e = level of significance

N = population size

e = 0.05 (i.e 5%) level of significance (95 % level of confidence)

$$\begin{aligned} \text{Therefore, } n &= \frac{75}{1 + 100(0.05)^2} \\ &= \frac{75}{1.25} \\ &= 60 \end{aligned}$$

Hence, the researcher then studied the sample size of 60 respondents in the area of study.

### 2.4 Instrument /Data Collection Procedures

Questionnaire was used in collecting data for the study since it will allow the respondents' time to ponder over the questions before answering them in order to generate appropriate findings by the respondents. The questionnaire was given to the respondents and retrieved immediately.

The primary data were collected directly from the respondents while the secondary data were collected from journals, articles, and literature that discussed the availability, utilization and importance of life support equipment/devices in healthcare facilities.

### 2.5 Validity of Instrument

Validity refers to the extent to which the instrument measures what it is expected to measure. This study adopted the face and content validity. Face validity reflect the extent to which the instrument actually reflect the variables in the study to be measured. While content validity refers to the extent to which the domain of the instrument covers the variable to be measured. Hence, to ascertain face and content validity, copies of the instrument were presented to the experts in this field of study for vetting and the corrections effected by the author.

### 2.6 Reliability of the Instrument

Reliability refers to the extent to which the instrument measures the variable on repeated trials and yields the same results. To ascertain the reliability of the instrument test-retest method was used. Test-retest reliability is a measure of reliability obtained by administering the same test twice over a period of time to a group of individuals.

**Table 2.1: Test-retest Reliability Results**

S/N	Variables	Test X	Test Y	XY	X <sup>2</sup>	Y <sup>2</sup>
1	Trained in the use of ICT?	6	6	36	36	36
2	Department/institution having the required systems?	4	4	16	16	16
3	The level of computer utilization by the academic and nonacademic staff.	4	4	16	16	16
$\Sigma$		10	10	68	68	68
Note: * $\Sigma$ means summation A coefficient of 1 was obtained, meaning that the reliability was perfect.						

### 2.7 Method of Data Analysis

The data gathered for this study were analyzed using descriptive statistic which include; simple percentage and mean score methods. The simple percentage was used in the analysis of the demographic variables of the respondents, while the mean score was used in the analysis of the research variables.

The formula for simple percentage is given as;

$$\text{Percentage (\%)} = \frac{\text{Number}}{\text{Total}} \times 100$$

## 3. RESULTS

### 3.1 Result of the Age of the Respondents

Table 3.1 showed that 20 respondents representing (33.33%) of the population were within the age 20-29 years, 30 (50%) were within the age of 30-49 years where as those within the ages of 10 and above were 15 (16.67%), participated in the study respectively.

**Table 3.1: Showing the Age Range of the Respondents**

<u>S/N</u>	<u>Age Range</u>	<u>Respondents</u>	<u>Percentage (%)</u>
1.	20-29 Years	20	33.33
2.	30-49 Years	30	50.0
3.	50 Years and above	10	16.6
TOTAL		60	100

### 3.2 Result of the Marital Status of the Respondents

The result in table 3.2 showed that close to half of the population of the respondents were married 33 (55%), a higher percentage were single 22(36.67%), 3 respondents (5%) were divorced whereas 2 (3.33%) of the respondents were widows, and participated in the study respectively.

**Table 3.2: Showing the Marital Status of the Respondents**

<u>S/N</u>	<u>Marital Status</u>	<u>Respondents</u>	<u>Percentage (%)</u>
1.	Single	22	36.67
2.	Married	33	55.0
3.	Divorced	3	5.0
4.	Widow	2	3.33
TOTAL		60	100

### 3.3 Result of the Educational Status of the Respondents

It was deduced from table 3.3 that greater percentage of the respondents 37 (61.67%) had tertiary school education; followed by those who had secondary education 15 (25.0%), while 8 (13.33) respondents had educational status of primary education.

**Table 3.3: Showing the Educational Status of the Respondents**

<u>S/N</u>	<u>Educational Status</u>	<u>Respondents</u>	<u>Percentage (%)</u>
1.	Primary	8	13.33
2.	Secondary	15	25.0
3.	Tertiary	37	61.67
TOTAL		60	100

### 3.4 Result of the Impact of Computer Literacy and ICT Utilization of Academic and Non-Academic Staff

For academic staff, Forty five (20) respondents representing 33.33% of the population have been trained in the use of ICT, 10 (16.7%) was not trained. 16 (26.7%) said no they don't have the required systems in their departments, while 20 (33.33) said they have. 8(13.33) utilizes computers during lectures, while 22(36.7) do not utilize computers during lectures. 10 (16.7) are provided with internet services, 20(33.33) were not provided with internet services.

For non-academic staff, 12 respondents representing 20% of the population were trained in the use of ICT while 18(30) were not trained. 18(30%) said the institution has the required systems, whereas 12(20%) reported that they do not have the required systems. 4(6%) utilizes computers for meetings, 26(43.33) do not utilize computer for meetings. 19(31.7) were provided with internet services, 11(18.33) said there was no provision of internet services.

**Table 3.4: Showing the Impact of Computer Literacy and Utilization**

<u>S/N</u>	<u>Items</u>	<u>Academic staff Yes (%)</u>	<u>Academic staff No (%)</u>	<u>Non-academic staff Yes (%)</u>	<u>Non-academic staff No (%)</u>	<u>Total (%)</u>
1.	Have you been trained in the use of ICT?	20 (33.33)	10 (16.7)	12(20)	18(30)	60 (100)
2.	Does your department/institution have the required systems?	16 (26.7)	14(23.3)	18(30)	12(20)	60 (100)
3.	Do you utilize computers during lectures and/or meetings?	8(13.33)	22(36.7)	4(6.7)	26(43.33)	60 (100)
4.	Are you provided with internet services?	10 (16.7)	20 (33.33)	19(31.7)	11(18.33)	60 (100)
<b>Average (%)</b>		<b>13.5(22.5)</b>	<b>16.5(27.5)</b>	<b>13.25(22.1)</b>	<b>16.75(28)</b>	<b>60 (100)</b>

### 3.5 Result of the Range of Level of ICT Utilization of Academic and Non-Academic Staff

The utilization level within the range of 1-40% was 14 (23.3%), 41-70 was 16(26.7%), but 71-100% level of utilization was found to be 0(0.00%) for academic staff respectively. For nonacademic staff, 13 (21.7%) was within the range of 1-40%, 17(28.33%) was within the range of 41-70% level of utilization.

**Table 3.5: showing the level of utilization of different Ranges**

<b>Academic Staff</b>			
<b>Ranges</b>	<b>1-40%</b>	<b>41-70%</b>	<b>71-100%</b>
	14 (23.3%)	16(26.7%)	0(0.00%)
<b>Non-academic Staff</b>			
<b>Ranges</b>	<b>1-40%</b>	<b>41-70%</b>	<b>71-100%</b>
	13 (21.7%)	17(28.33%)	0(0.00%)

## 4. DISCUSSION

### 4.1 Discussion of findings

The present study revealed that most of the staff of the college has been trained in the use of ICT but their departments don't have the required systems to be used for teaching and administrative functions, but there are not enough training opportunities for the staff. This is in line with the finding of Livinus in 2013 who found out that there were not enough training opportunities for teachers in using ICTs in a classroom environment. Similarly, Beggs (2000) found that one of the top three barriers to teachers' use of ICT in teaching was the lack of training.

The ICT tools present are obsolete and damaged, which were attributed to poor management, non-availability of standard ICT department and technical staff as revealed by the study. This agrees with the findings by Gomes in 2005, who concluded that lack of training in digital literacy and in how to use ICT in the classroom and lack of training concerning technology use in specific subject areas were obstacles to using new technologies in classroom practice.

Greater percentages of the academic and non-academic staff do not utilize computers during lectures and meetings. This is to say that the lecturers were not conversant with the use of digital and modern teaching aids like the projectors, smart television, audio-visual aids and so on.

The internet services provided was seen to be within the reach of only those at the administrative block of the college, the network coverage doesn't get to the class rooms. However, majority of the non-academic staff made use of the internet services as they have their offices located in the administrative block of the college where the internet server is being mounted.

Some of the solutions as revealed by the study were provision of adequate manpower and equipment, proper administrative system as well as establishment of functional ICT department.

### 4.2 Conclusion

The study identified that the some staff of the college are not trained in the use of ICT, and does not have the required ICT systems for use in teaching and administrative duties.

## 5. RECOMMENDATIONS

1. Provision of adequate manpower and equipment.
2. Proper administrative system as well as establishment of functional ICT department.
3. Training of staff on the use of ICT.

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