THE ROLE OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) IN THE ACADEMIC PERFORMANCE OF UNIVERSITY OF BENIN POST GRADUATE STUDENTS

Abstract: *Student performance has several elements but most significant is the role the information communication technology plays. Student's performance in modern society is indeed in variance when in contrast with the traditional method deployed over the past few decades. The ICT is a revolution and has bridge the divided world of information thereby leading proliferation of resources around the globe. This study is a fact finding into the role of ICT in student performance in contrast to the traditional method of research in the time past. University of Benin (Uniben) Post Graduate Students were used to solicits the needed information that aid the decision of this research and from the findings it was observed that there is a significant different between the users of the ICT facilities and the non users. Table 1, 2, 3, and 4 as tabulated below shows a positive impact of ICT on student's performance. From the testing, the t-test was 1.96 at 0.05 significance levels, while the t-value was 4.677 and this to a large degree shows clear distinction to viability of the impact of the use of ICT on the positive performance on student compares to the traditional method.*

Keywords: *Impact, Research, Revolution, Concept, Role, Empirical and internet*

I. INTRODUCTION

In recent times, Information Communication Technology (ICT) has changed the scope of learning and it link to the performance of student has indeed be a focus point for extensive debate. The last decade has been has seen a shift from the traditional method of learning to more digitalized method and these are seen from the ICT penetration. Research into ICT role has explained the added value in classrooms as well as on students' performances. Some literatures have look at the impact of computer uses. However, since the internet revolution, there has been a movement in many literatures on the focus on its impact in online activities and this includes the educative online platforms, digital devices, use of blogs, wikis, games, social media etc. From empirical studies, some of the literatures are divergent in opinions and theory propounded. While some literatures shows that there is no evidence of the key role for ICT in higher education, others shows a real impact of ICT on the students s' performance [1, 2, 3, 4, 5, 6, 7]

Empirically, the academic field is becoming more demanding in modern society. As knowledge is expanding in scope and size, modern technologies placed a huge body on the deployment of Information Communication Technology (ICT) in learning. ICT creates opportunities for communication within and outside academics: creating new approach of learning for students. The day to day uses of ICT create the enable environment to acquiring the needed skills that facilitates learning and other social benefit. ICT is an important tool for promoting inclusive learning [8]. Access to ICT within academic institution is the gate way to availability of scholarly materials in an institution [9]. However, not only does ICT saves time it endless benefit in cost management and others such as speed processing, distance learning possibility, students

assessment achievement, administration of examination via Computer based Test (CBT) cannot be under estimated [10].

The sessions are arranged as follows: Session 2 review ICT as a change agent, session3 look at ICT and the academic staff, session 4 examine the role of academic institution and ICT, session 5 elucidate on the research approach while session 6 discuss the result findings.

II. RELATED WORK

The advent of ICT has shown within a short time that ICT has become one of the blocks of a modern society education. This in many ways has made countries now regard ICT as a change variable in education and has created a basic for mastering its basic concepts as part of the core of education [11]. The emergence of ICT ha indeed transformed the activities of its end users as well as setting of globalization. According to [12], the introduction of ICT into secondary school curriculum in India has tremendously improved students performance in chemistry at secondary school level. Recent times, there has been overwhelming support locally and internationally on the use of ICT in delivering learning [13].

[14] Defines ICT as a collection of technical devices and resources which are use to transmit, store, manage information. The literature also explained that the utilization of ICT as instructive process has been partitioned into two classification:

(i) ICT for Education: this involves the development of ICT particularly for teaching and learning purpose

(ii) ICT in Education: this is the adoption of ICT in the instructional process [13].

Various studies from empirical analysis have shows that there has been a constant increase in sophisticated and enabling technologies. Hence, technological literacy is a must requirement for all purposes. The increase in the growth of ICT is directly proportional to the life style of modern society children. Furthermore, 21st century has witness a tremendous impact in Information Communication Technology (ICT). This period has help to bridge the divided world into one single entity thereby leading to inflow of experience in economizing the academics achievement of Lecturers and students. ICT resources in teaching and learning environment has found to be very central to access, spreading and dissemination of information on education.

According to [15, 16], internet is a worldwide system of computer networks, a network of network in which users at any computer can, if they have permission get information from any other computer (and sometimes talk directly to user at other computers). The Advanced Research Project Agency Network (ARPANet) in 1969 by the US Department of Defense. they came up with the internet and this was attributed to military intelligence and research with university resources [17]. Internet is regarded as one of the major revolution in ICT and has affected the world positively. Though, it has its negative side but the positive nature out weight the drawback associated with it. In 1973 the protocol suit was developed for use and the outcome of the research effort gave birth to what is known as Transmission Control Protocol/Internet Protocol (TCP/IP) [16].

78 [18] made known that the internet penetration got to Nigeria in 1991 when the e-mail services of
79 the internet was introduced through dial- up to few users and access to internet then was through
80 Cyber Cafés connected to Internet Service Provider (ISPs). As captured by [17], in 1995 the
81 Regional Information Network for Africa (RINAF) commenced internet services at the computer
82 science department of Yaba College of Technology, and through the Nigeria Postal Service
83 (NIPOST), in a collaborative effort with Rose Clayton Nigeria Limited. The World Wide Web
84 (WWW) became available in 1996 and its full access became obvious in 1998. From what the
85 ICT offers, it is a well know fact that all university around the globe are connected to the internet
86 for the sole purpose of research, information dissemination and adding to the knowledge base of
87 the society so as to create up to date information that drives the world . ICT is a term for
88 information technology (IT). The technology is the integration of telecommunications (telephone
89 lines and wireless signals), computers and other necessary enterprise software that drives it.

90 ## III. THE ICT AND ACADEMIC STAFF

91 The performance of academics is centered on research breakthrough and several elements
92 contributed to the breakthrough measurement. The measurement of literature includes experience
93 from workshops, conferences attended and scholarly work from well know journals. Modern
94 schools lecturers are assessed on the usage of ICT because all things within academic institution
95 revolve around ICT. Internet plays a major role in a research community. Academics broaden
96 knowledge skill via the materials retrieved from the internet and many lecturers within academic
97 institution hardly visit the library because the internet housing millions of library published
98 articles. [19] in a work published by [20] said the convergence of computers and
99 telecommunications technologies has made possible the activities which were considered
100 impossible in the past. Internet facilities such as the e-mail, FTP, www, Talnet, mailing list etc.
101 can be used to enhance teaching and research. The facilities bring to academic staff up-to-date
102 information in the research community

103 The increase in teaching and research output of academic staff is traceable to the services
104 rendered by the internet. The internet enables academics download several material from
105 different web site [21, 22, 23]. There is an impact in the academic staff performance and this is
106 based on the quality of papers in the 21st century [24]. [21] In a comparative study between
107 Babcock University and Covenant University showed that output of research increased with the
108 advent of internet services is more than the era before the internet. [25] In a study showed that
109 the use of electronic literature by University of Finland improved their work in many ways.
110 Because it provides access to literatures and has direct correlation to the content and quality of
111 scholarly work

112 [26] Reports that the internet contributes positively to reference work of many library
113 professionals and enhance effectiveness and efficiency. [27] Showed that electronic journal. The
114 response was that electronic journals are strongly accepted in Netherlands in particular by
115 scientist and social scientists and have serious impact on research work [21].

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IV. THE ACADEMIC INSTITUTION AND ICT

ICT in schools is a variable tool which enhances educational content and learning techniques. It is a process that helps in the interactive instructive mechanism for teaching and bringing to the understanding of students. Applications and other add on devices provides attractive learning atmosphere for learners. Furthermore, the fundamental principle of ICT is on the availability as at when needed without necessary going through the bureaucratic process of the traditional libraries. ICT provides easy to use mechanism without much burden on people and this flexibility has made many scholars to embrace it positive impact so as to change the needed drawbacks in academics. Indeed, many homes in the developing countries like Nigeria are not privilege with the use of ICT. However, both secondary and higher institutions now provide the opportunity for people with the facilities so as know how to use and learn from them. Modern Schools have made it possible for people to know how ICT works [28].

a. Teaching and ICT

Teaching via ICT can be interesting and this is because it offers a comparative and competitive advantage over the traditional method of teaching. However, this cannot be possible if both students, teachers, policy makers fails to negate the drawback associated. ICT can strive better if the factors that influence the drawback is discontinued. Notwithstanding, factors such as attitude, competence, self development, experience, policy as well as others that could affect the deployment of ICT in teaching are controllable. In a survey conducted by [29], [30] shows that the above factors could be classified into

(1) Teacher-level barriers

(2) School-level barriers and

(3) System-level barrier

These three levels are the basic of all barrier levels associated with non deployment of ICT in teaching or classrooms. The three must be able to harness for a smooth delivering or deployment of ICT in teaching.

b. Student Performance and ICT Correlation

Internet has brought a revolutionary change in today's world and has increase the scope and size of all academics. The idealistic nature of ICT in teaching is to boost student's performance and from the literature reviewed, it could be ascertained that ICT has contributed immensely to the performance in both ways (directly and indirectly). Prior to the emergence of internet most of the traditional libraries were not habitable. In a school of over three million (3,000,000) students the library has a capacity of less than five hundred (500) students. So, the competition for space by student and lecturers was overwhelming. Availability of resource materials was another course of concern. The internet via e-library has help to mitigate if not eliminate this difficulty associated with the traditional method thereby leading to excellent performance on the part of the

student. Lecturers can now download or get materials as at when due and replicate study on students [19, 21].

V. RESEARCH APPROCAH

The investigation was hinged upon on survey method. The target population for the study comprised postgraduate students of the University of Benin who registered with the University Internet Facilities for the 2017/2018 academic session. The students figure stood at 3877 students. The random sampling technique was used to select 300 students that formed the sample for the study. The instrument used for the collection of data was the questionnaire. A structured questionnaire was designed in line with the basic objectives of the study. The questionnaire for the research consists of both optional type and statements in a 4-point scale. Of the total questionnaire distributed, a high percentage of about 268 about 89% were completely and correctly filled. They were received and found usable, The collected data was analyzed using the SPSS for statistical analysis and frequency and percentage was used to present result for the research questions raised while the t-test analysis was used to test hypothesis.

Table: 1Frequency of Postgraduate use of Uniben Internet facilities

Used	Daily	More than once a week	Weekly	Occasionally	Total
0(0%)	107(39.1%)	76 (27.7%)	34(12.4%)	217 (79.2%)	
Never Used (20.8%)					57
Total (100%)					**268**

From the Table 1, it was observed that total of 217 (79.2) respondents use Uniben Internet facilities at different levels while 57 (20.8%) respondents never used the Uniben Internet facilities. One can therefore infer that the Uniben Internet facility enjoys very good patronage by the postgraduate students.

Table 2: Purpose of use of the Uniben Internet facilities

Purpose of use of the Uniben Internet Facilities	Strongly Agree	Agree	Disagree	Strongly Disagree	Total
Assignment	138(50.4%)	102(37.2%)	24(8.8%)	10(3.6%)	268(100%)
Examination	114(41.6%)	95(34.7%)	45(16.4%)	20(7.3%)	268(100%)
Expansive reading	137(50%)	89(32.5%)	26(9.5%)	22(8%)	268(100%)
Social Media	28(10.2%)	31(11.3%)	191(69.7%)	24(8.8%)	268(100%)
Download for re-use	99(36.1%)	71(25.9%)	62(22.6%)	42(15.3%)	268(100%)

From Table 2, item 1 has 138 (50.4%) of respondents strongly agree that assignment is the reason for using internet, 102(37.2%) also agree to that notion, 24(8.8%) of the respondents disagree that assignment is the only reason for entering internet, while 10(3.6%) strongly disagree. It is equally observed that all the items above, with the exception of chat with friends on social media, received positive responses. It therefore shows that most students perceive that

180 the purpose of use of the Uniben Internet facilities is for academic work only. This could be
181 because those who had used the resources discovered that the managers of the Uniben Internet
182 facilities programmed it in such a way that it grants the students access for academic purposes
183 only.

184 **Table 3: Perceived benefit of using the Uniben Internet facilities by students**

Influence of Uniben Internet facilities	Strongly Agree	Agree	Disagree	Strongly Disagree	Total
Use of Uniben Internet facilities has aided my reading ability	96(35%)	108(39.4%)	46(16.8%)	24(8.8%)	268(100%)
Use of Uniben Internet facilities has influenced my research ability and therefore aid me in doing assignment	110(40.1%)	121(44.2%)	30(10.9%)	13(4.9%)	268(100%)
Use of Uniben Internet facilities has distracted me from my studies because of the. many social media available in it	28(10.2%)	26(9.5%)	136(49.6%)	84(30.7%)	268(100%)
Use of the Uniben Internet facilities aided my understanding of courses taught	124(45.3%)	89(32.5%)	48(17.5%)	13(4.7%)	268(100%)

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186 From Table 3, it is observed that most respondents affirmed to the benefits of using the Uniben
187 Internet facilities while lesser number 136 (49.6%) and 84 (30.7%) of the respondents consented
188 to the Uniben Internet facilities being a distraction, in their perception. It is possible majority of
189 this number are from those who had not used the Uniben Internet facilities yet' It therefore
190 shows that academic activities of many students have been positively impacted upon by the use
191 of the Uniben Internet facilities

192 **Table 4: t-test analysis of variance difference in performance of postgraduates who use the**

193 **University of Benin internet facilities and those who do not make use of it in their academic**

194 **activities.**

Variables	N	Mean	SD	df	r-cal	p-value
Users	217	78.783	10.54			
				272	4.677	1.96
Non users	57	85.930	9.15			

195 $P < 0.05$

Table 4 shows that the t-test was 1.96 at 0.05 level of significance while the t-value was 4.677. The Null hypothesis is therefore rejected. Hence, there is significant difference between the performance of users of the University of Benin internet facilities and those who do not use it, in their academic activities.

VI. FINDINGS EVALUATION

The study examined the impact of ICT on the academic performance of post graduate students in University of Benin. From the Findings, it could be ascertained that most post graduate students of the University of Benin make use of the Uniben ICT facilities. The study has also demonstrated the perceptions on the use of the ICT facilities but majority is of the view that is mainly for academic purposes as against social media use. Furthermore, the findings showed that most students agreed that the use of the facilities has impacted positively on student's academic performance. From the above analysis, there is corroboration of the findings to that of the views of [31] on the effects of ICT on students' academic achievement. ICT was found more effective on students' academic performance when in contrast with the traditional teaching facilities. The results of the findings are also consistent with [12] who found that ICT has positive impacted on student scores on secondary school level. Similarly, [32] in a published work showed that ICT integration into teaching and learning impact student performance positively in science subjects. In the same way, [33] said that ICT has positive effect on students' scores. Similarly, [34] explained that students performed better when taught through ICT as in contrast to those who were taught via the traditional approach. ICT has come to bridge the overwhelming drawback associated with the traditional approach of teaching thereby creating exciting atmosphere for students to strive better in academics. The analysis from the Uniben Postgraduate students is an attestation to the positive revolution of ICT among students and this is not just in post graduate but across board.

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