

## **ASSESSMENT OF THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON THE ACADEMIC PERFORMANCES OF STUDENTS OF POLYTECHNICS IN THE NORTH-EASTERN NIGERIA**

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### **Abstract**

The study is to assess the role of Information and Communication Technology (ICT) on the academic performance of students of Polytechnics in the North-East, of Nigeria. The study was guided by four objectives, some of the problems that influences the academic performance of students, that necessitated the study include; lack of availability of ICT infrastructure and facilities, lack of accessibility to ICT Infrastructure and facilities, lack of proper utilization of the internet and lack of proper utilization of social media. Four research questions, and four Null-hypotheses.. A cross-sectional survey was adopted as the research design. The population of the study is 6,082 from which the sample size of 361 was drawn using Krejcie & Morgan table. An adapted questionnaire with the title “Assessment of the Role of Information and Communication Technology on Students” Academic Performance, (ARICTSAP) was used as an instrument for data collection.. The study have employ the use of descriptive statistics using frequency distribution tables, and percentages. It can be deduced from the study that, utilization of internet has least chance of influencing (negatively/positively) academic performance of students. It was recommended that Government should provide ICT infrastructure to each Polytechnic in northeast in order to have a conducive environment for learning and enforce integration by regular supervision

*Keyword; Information communication Technology (ICT) , Social, media, Students.*

## **Background of the Study**

Students were believed to be the most valuable assets as well as at the forefront of any educational setup. The performance of students characterizes the aptitude of students concerning their capability to learn. Learning to perform modification in interactive potentiality occurs as a result of reinforced training (Maksy & Rodriguez, 2017). Academic performance, as described by Narad and Abdullah (2016), is the student's knowledge that is judged by a teacher based on their marks and/or the educational objectives that both students and teachers set out to accomplish over a predetermined amount of time. The primary goal of academic institutions is to help students achieve academic greatness by helping them display greater academic performance (Adeyemo, 2001). Anyone who cares about education must consider academic success as being of utmost importance (Osiki, 2001). The chances of producing a skilled workforce that will support the country's economic and social development are better as a function of how well the kids perform academically (Ali, et al, 2009 According to Narad and Abdullah, (2016), academic performance is defined as the knowledge gained by the student which is assessed by marks by a teacher and/or educational goals set by students and teachers to be achieved over a specific period. The attainment of academic excellence for students by making them portray better academic performance is the foremost motive of academic institutions (Adeyemo, 2001). Academic performance is something immensely significant for anyone who has a concern with education (Osiki, 2001). The better the students perform academically, the better the prospects of the development of fine manpower, which will contribute to the economic and social development of the nation (Ali, et al, 2009).

Information and Communication Technology (ICT) is a force that has changed many people's way of life. The widespread influence of ICT has brought about a rapid technological, social, political, and economic transformation, which has paved the way for a network society, organized around ICT. ICTs can enhance the quality of education in several ways; by increasing learner motivation and engagement. ICT enhances teaching and learning through its dynamic interactive and engaging content and provides real opportunities for the individualization of instruction. Facilities for Information and communication technology (ICT) include computers,

the internet, and electronic delivery systems such as radios, televisions, and projectors among others, and are widely used in today's education field, (Shan Fu, 2013). Kent and Facer (2004) indicated that school is an important environment in which students participate in a wide range of computer activities, while the home serves as a complementary site for regular engagement in a narrower set of computer activities. Kirschner and Weperis (2003) maintained that ICT can make the school more efficient and productive, by organizing a variety of tools to enhance and facilitate teachers' professional activities. ICT is a central force in economic and social shifts that has technical skills critical to the future employment of today's students. ICT tends to expand access to education. Through ICT, learning can occur anytime and anywhere. Online course materials, for example, can be accessible 24 hours a day, seven days a week. Teleconferencing classrooms allow both learners and teachers to interact simultaneously with ease and convenience. Based on ICT, learning and teaching no longer depend exclusively on printed materials. Multiple resources are abundant on the internet, and knowledge can be acquired through video clips, audio sounds, visual presentations, and so on. Current research has indicated that ICT assists in transforming a teaching environment into a learner-centered one (Sanchez & Aleman 2011).

Researchers have found that ICT motivates students to learn and goes a long way to broaden their horizons. To enhance the academic performance of students there is a need to turn from conventional teaching methods to modern technological teaching methods which according to several studies boost the morale of students to wish to learn. Students receiving instruction through ICT retain learning better (Cotton, 2001). Olatun (2008) indicated that most students believed the internet to be far better and more convenient than their school libraries. They saw it as a source of general knowledge and hence it has helped them improve their academic performance. Computers and the internet have been touted as potentially capable means to empower users for educational changes and improvement, by utilizing various information and resources and receiving information from different points of view hence, cultivating the authenticity and actuality of learning situations (Tinio, 2002). Social media is another ICT platform that plays a central role in the learning environment as a crucial communication network. Social media has many advantages in the education field. It provides access to information, supports learning attitudes, provides social support, encourages self-learning, and allows collective learning, (Azizi, Sroush & Khatomy, 2019).

### **13. Objectives of the Study**

The overall objective of this study is to assess the Role of information & communication Technology (ICT) on the academic performance of students. However, the specific objectives are as follows:

1. To examine how the lack of availability of ICT infrastructure and facilities influences the academic performance of students in North-Eastern Polytechnics in Nigeria.
2. To examine how lack of accessibility to ICT Infrastructure and facilities influences the academic performance of students in the North-Eastern Polytechnics in Nigeria.
3. To examine how the lack of proper utilization of the internet influences the academic performance of students in the North-Eastern Polytechnics in Nigeria.
4. To examine how the lack of proper utilization of social media influences the academic performance of students in the North-Eastern Polytechnics in Nigeria.

### **Research Questions**

1. How does the lack of availability of ICT infrastructure and facilities influences the academic performance of students in the North-Eastern Federal Polytechnics in Nigeria?
2. How does the lack of accessibility to ICT infrastructure and facilities influences the academic performance of students in the North-Eastern Polytechnics in Nigeria?
3. How does the lack of proper utilization of the internet influence the academic performance of students in the North-Eastern Polytechnics in Nigeria?
4. How does the lack of proper utilization of Social media influence the academic performance of students in the North-Eastern Polytechnics in Nigeria?

### **Statement of the Problem**

The role of ICT in enabling the education industry to manage complex information flows and integrate them towards effective educational planning and development cannot be over- emphasized. Although ICT holds great potential in supporting and augmenting the existing educational system as well as national development efforts in Nigeria, several challenges remain. These include amongst others; a lack of adequate ICT infrastructures including computer hardware, software, and bandwidths/access on the campus. It has been observed that the majority of the students use their mobile devices and buy data for their academic activities

and in some instances depending on business centers for their assignments and project writing due to the lack of adequate ICT infrastructure and facilities in the school and this has to refrain them from being exposed to the necessary skills and benefits of it. According to Gambari and Adaeze (n.d), most institutions do not have the necessary ICT facilities for instruction and research nor do the lecturers possess skills in ICT for effective classroom interactions. This corroborates with Kitschner (2003), who noted that inadequacies in human and material resources, poor funding, lack of infrastructure, and poor implementation of policies were some of the factors responsible for the situation. The use of ICT in education improves the quality and the quantity of education (Balasubramanian, Okah,, Daniel, & Ferreira, 2009)) and causes better innovative, creative, and cognitive thinking, higher productivity, efficiency, and educational outcomes (Adeosun, 2010).

### **Concept of Information and Communication Technology (ICT)**

According to Nwachukwu (2004), Information and communication technologies (ICTs) are the application of computers and other technologies for the acquisition, organization, storage, retrieval, and dissemination of information. However, in this context, information and communication technology is the use of electronic devices such as computers, telephones, the internet, and satellite system, to store, retrieve and disseminate information in the form of data, text images, and others. ICT includes technologies such as desktop and laptop computers, software, peripherals, and connections to the internet that are intended to fulfill information processing and communication functions (Islam & Fouji 2010). Information Communication Technology is a common term referring to the technologies used for collecting, storing, editing,

and communicating information in various formats. ICT means the use of computer-based technology and the Internet to make information and communication services available to a wide range of users. ICT is Hardware and Software that enable society to create, collect, consolidate and communicate information in a multimedia format and for various purposes. The term ICT includes any communication device or application, encompassing, radio, TV, cellular phones, computers and network, hardware and software, satellite systems, and so on, as well as the various services and application associated with them. ICT is playing a vital role in the current and future development of society and nation. ICT has affected all spheres of life and also the library. Information and communication technology (ICT) is a diverse set of technological tools and resources used to communicate and create, disseminate, store and manage information

### **Availability and Accessibility of ICT Infrastructure/facilities and Academic Performance**

ICT infrastructure refers to hardware such as computers, scanners, photocopiers, mobile phones, printers, projectors, and broadcasting technologies which include radio and TV as well as essential software that enhances teaching and learning. ICT infrastructure must be connected through computer networks and internet connectivity to allow for sharing and distribution of data and information among teachers and students. Researchers concur that ICT infrastructure must be easily accessed and used by all (Ozer & Yilmaz, 2011). Schools should increasingly employ multimedia applications to stimulate teaching and provide exciting opportunities and activities for students (Neyland, 2011). A networked school is not just a school with a physical network, but where it is beneficial to do so, utilization of resources from outside the school's own network can be applied (Bielefeldt, 2012). Like curriculum, ICT infrastructure directly influences the outputs and outcomes of the use of ICT in teaching and learning. Consequently, the use of ICT not only enhances learning but also prepares the next generation for future lives and careers (Wondemtegegn, 2018). The use of ICT infrastructure in an educational setting by itself acts as a catalyst for change in the domain. ICT infrastructure can support more powerful and complete knowledge-building experiences for learners if there are integrated well-designed technologies (Giordano, 2007). ICT infrastructure provides a learning environment that allows students to learn by solving problems, thinking for themselves, and collaborating with others (Kimanzi, Bwire & Miima, 2018). They create a learner-centered environment by motivating learners through combining text, sound, color, and moving images that enhance content for easier learning and facilitate the acquisition of basic skills through practice (UNESCO, 2008). ICT infrastructure has the potential to accelerate, enrich, and deepen skills, motivate and engage students, help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthen teaching and help schools change (Tileston, 2004). ICT enriches students with skills and knowledge for the 21st century (Andoh, 2012), such that it can add to worldwide access to education, educational equality, broadcasting of quality teaching- learning programs, educators' professional growth, and help in obtaining more effective educational management. Hence, accessibility, inclusion, and standard being the key issues of education, can be comfortably addressed through

and communicating information in various formats. ICT means the use of computer-based technology and the Internet to make information and communication services available to a wide range of users. ICT is Hardware and Software that enable society to create, collect, consolidate and communicate information in a multimedia format and for various purposes. The term ICT includes any communication device or application, encompassing, radio, TV, cellular phones, computers and network, hardware and software, satellite systems, and so on, as well as the various services and application associated with them. ICT is playing a vital role in

the current and future development of society and nation. ICT has affected all spheres of life and also the library. Information and communication technology (ICT) is a diverse set of technological tools and resources used to communicate and create, disseminate, store and manage information.

### **Negative Effects of Social Media Networks on Students' Performance:**

Social media networks, as well as other new forms of communication technology, are also a concern to many school professionals because of the level of distraction they create within the school (Greenfield & Subrahmanyam, 2008). They further buttressed that even though many schools have created many strict rules that forbid the use of handheld technology during school activities or that block certain social networking websites, many students are still able to connect during lecture hours as they please. This has caused distractions during instruction time and has harmed the learning environment.

Social media/networking has been noted to have some negative effects on students' academics:

- i. *Displacement effect on academic activities:* since the majority of students use social networking sites for socializing purposes, they, therefore, tend to spend more time for socializing rather than learning. Thus, excessive use of SNSs reduces students' academic performance since time meant for studies is used on non-academic issues like chatting and making friends (Salvation & Adzharuddin, 2014).
- ii. *Psychological disorders and health problems:* anxiety, depression, poor eating habits, and lack of physical exercise; increasingly short attention spans and subverted higher-order reasoning skills such as concentration, persistence, and analytical reasoning among frequent users of social media; a tendency to overestimate one's ability to multi-task and manage projects; and technology being seen as a substitute for the analytical reasoning process. Collectively, these play roles in a student's educational process to various degrees and at various times.

and/or at designated places revealed a preponderance of negative, indecent, and unproductive use of the internet.

### **Research Location**

This research work will be conducted on the ND II and HND II students of the 2020/2021 academic session from the School of Management Studies of North-Eastern Polytechnics in Nigeria, which are; Federal Polytechnic, Damaturu, Yobe State, Ramat Polytechnic, Maiduguri, Borno State, Federal Polytechnic, Bali, Taraba State, Federal Polytechnic Mubi, Adamawa State, Gombe State Polytechnic, Gombe State, and Federal Polytechnic, Bauchi, Bauchi State.

### **Sample Size/Sampling**

A sample of 361 was drawn from the total population of 6,082. Due to the high number of respondents, the



researchers cannot cover the whole population. The research adopted the Krejcie & Morgan table in selecting the sample size. After then multistage sampling would be employed in administering the questionnaires to the respondents in their respective institutions.

### **Instrument of Data Collection**

The main instrument to be employed for the collection of data will be adapted questionnaires. The purpose of adapting the questionnaire is to better fit the needs of a new population, location, language or mode, or any combination thereof (Harkness, 2008; Harkness, Villar & Edwards, 2010). After successful adaptation, the study will come up with a new questionnaire titled “Assessment of the Role of ICT on Student Academic Performance Questionnaire (ARICTSAP)”, which would be used to get the desired information from the respondents. The questionnaire was intended to be used because of its convenience. The principal requirement of the questionnaire format is that questions are sequenced in a logical order, allowing a smooth transition from one topic to the next (Sarantakos 2005). This can be accomplished by grouping related questions under a short heading describing the section’s theme. This was in line with the recommendation of Agbamu (2005), who opined that this will enable the respondents to indicate the degree of their opinion on a given statement.

The questionnaire will be divided into two sections. Section A will focus on the Demographic characteristics of respondents. Section B will contain the questionnaire items. The study intended to use a 4 Likert scale with four rating options as below:

SA	= “Strongly Agreed”	= 4
A	= “Agreed”	= 3
D	= “Disagreed”	= 2
SD	= “Strongly Disagreed”	= 1

### **Validity of the Instrument**

The validity of a research instrument assesses the extent to which the instrument measures what it is designed to measure (Robson, 2011). For the purpose of this study, construct validity would be employed for internal consistency. Construct validity is the accumulation of evidence to



support the interpretation of what a measure reflects. It is also the appropriateness of inferences made based on observations or measurements (often test scores), specifically whether a test can reasonably be considered to reflect the intended construct. It was intended to be used because it is a device popularly used almost exclusively in social science, psychology, and education. To check construct validity the study will adopt AVE (Average Variance Extracts). It measures the level of variance captured by a construct versus the level due to measurement error and its value of more than 0.7 is considered very good, whereas, a level of 0.5 and above is acceptable (Hair, Black, Balin, & Anderson, 2010). Therefore if the AVE satisfies the minimum cutoff value, 0.7, and is greater than 0.5 it will be considered acceptable.

### **Method of Data Analysis**

The study will employ the use of descriptive statistics using frequency distribution tables and percentage to analyze the data.

## DATA PRESENTATION AND DISCUSSION OF FINDINGS

**Table 1 Personal data**

ITEMS	FREQUENCY	PERCENTAGE
<b>INSTITUTIONS</b>		
	60	17.3
	58	16.8
	60	17.3
	56	16.2
	55	15.9
	57	16.5
<b>Total</b>	<b>346</b>	<b>100%</b>
<b>SEX/GENDER</b>		
Male	220	63.58%
Female	126	36.42%
<b>Total</b>	<b>346</b>	<b>100%</b>
<b>AGE</b>		
16 – 20	120	34.68%
21 – 25	180	52.02%
26 – above	46	13.3%
<b>Total</b>	<b>346</b>	<b>100%</b>
<b>LEVEL</b>		
HND II	122	35.26%
ND II	224	64.74%
<b>Total</b>	<b>346</b>	<b>100%</b>

Source: survey 2023

### Analysis / Interpretation of Table 1

Table 1 shows; Institutions Gender, majority of respondents were male with percentage 63.58%. The also clearly revealed that majority of the respondents fall within 21 – 25 years with the percentage of 52.02%. Level: The percentage of Higher National Diploma (HND) students is 35.26%, and that of National Diploma (ND) is 64.74% %. This therefore indicates that majority of the respondents were from National Diploma Programme.

## QUESTION 1 frequency on the influence of the availability of ICT infrastructure and facilities on academic performance of students

**Table 2**

S/N	ITEMS	SA	A	D	SD	TOTAL
1	Adequate Computers are available for students use in my department	158 45.7%	74 21.37%	74 21.37%	40 11.56%	346 100%
2	Presentation tools are available for students learning in my department	152 43.93%	86 24.86%	70 20.23%	38 10.98%	346 100%
3	Internet connectivity is available for student learning in my department	145 41.91%	98 28.32%	85 24.57%	18 5.20%	346 100%
4	Scanners are available for students use in my department	98 28.32%	110 31.8%	128 36.99%	10 2.89%	346 100%
5	Printers are available for students use in my department	117 33.82%	120 34.68%	86 24.86%	23 6.65%	346 100%
6	A functional ICT laboratory is available for students learning in my department	90 26.01%	96 27.75%	133 38.44%	27 7.80%	346 100%
7	instructional soft wares are available for students learning in my department	84 24.28%	58 16.76%	137 39.59%	67 19.36%	346 100%
8	There is stable power supply for students ICT practical in my department	62 17.92%	55 15.89%	145 41.91%	84 24.28%	346 100%
9	The school library has computers and internet facilities for student use	96 27.75%	92 26.59%	127 36.70%	31 8.96%	346 100%
10	adequacy of ICT infrastructure and facilities improve my CGPA	83 23.99%	98 28.33%	145 41.90%	20 5.78%	346 100%
11	Lack of availability of ICT infrastructure & facilities does not have significant influence on my performance	74 21.39%	136 39.30%	112 32.37%	24 6.94%	346 100%

### Discussion

Table 2 shows the high percentages of 45.7% (SA), 43.93% (SA), 41.91% (SA), 36.99 (A), and 34.68 (A) from items numbers 1, 2, 3, 4 & 5. Respondents strongly Agree/Agree that there are available computers, presentation tools, internet connectivity, and printers in their departments. While high percentages of 38.44% (D), 39.59% (D), 41.91% (D), and 36.70% (D), from items numbers 6, 7, 8, and 9. The respondents Disagree (D) with the statement on the availability of ICT laboratories, instructional software, stable power supply, computers and internet in the libraries in the North Eastern Polytechnics. Percentages 41.91% (D) Disagree with the statement that adequacy of infrastructure improves their GPA. On the other hand, 39.30% (A) from item 11 Agree that lack of ICT infrastructure and facilities does not influence their performances. This indicates that the major ICT infrastructure/facilities for students' learning which are; ICT laboratories, instructional software and stable power supply are lacking/inadequate and this does not influence their performances.

**Table 3 Question two Frequency on the influence of the Accessibility of ICT infrastructure and facilities on students' academic performance**

S/N	ITEMS	SA	A	D	SD	TOTAL
12	Students have free access to the ICT laboratory in my department	88 25.44%	116 33.53%	118 34.10%	24 6.94%	346 100%
13	Students have access to the ICT facilities in the laboratory	96 24.75%	132 38.15%	85 24.57%	33 9.54%	346 100%
14	Students have limited access to the ICT laboratory and the facilities therein	107 30.924%	120 34.682%	82 23.699%	37 10.694%	346 100%
15	School Library allows students to access the ICT facilities for their assignment and research	95 27.457%	145 41.91%	80 23.12%	26 7.514%	346 100%
16	Students can access the internet service available in the school	76 21.965%	114 32.95%	126 36.416%	30 8.67%	346 100%
17	School provides Wi-Fi available in the campus for students use	70 20.23%	76 21.965%	117 33.815%	83 23.99%	346 100%
18	Students frequently visit cafes for their academic work	227 65.607%	71 20.520%	28 8.092%	20 5.780%	346 100%
19	Students make use of their phones for their academic work	200 57.803%	102 29.48%	32 9.249%	12 3.468%	346 100%
20	Students buy data to access the internet for their academic work	170 49.13%	138 39.9%	38 10.98%	- -	346 100%
21	Access to ICT makes learning more real and concrete to student hence improved students GPA	186 53.76%	133 38.44%	27 7.80%	-	346 100%
22	Lack of access to ICT infrastructure and facilities does not influence students' performance	186 53.76%	118 34.10%	30 8.67%	12 3.47%	346 100%

## Discussion

Table 3 presents the high percentages of 34.10% (D), 38.15% (A), 34.682% (A), 41.91% (A), 36.416% (D), 33.815%(D), from items numbers; 12, 13, 14, 15, 16 and 17. Respondents Agree (A) that they have access to ICT facilities in the ICT laboratories, Libraries, but Disagree with the statement that internet and Wi-Fi are available in the campus and that they have limited to the ICT laboratories in the schools. On the other hand, high percentage of respondents of 65.607% (SA), 57.803% (SA), 49.13% (SA), 53.76% (SA) and 53.76%(SA) from items numbers 18, 19, 20, 21, and 22. Respondents Strongly Agree with the statement that they visit cafes, make use of their phones, and buy data to access the internet, and that ICT makes learning more real and concrete and that lack of access to ICT infrastructure in the North Eastern Polytechnics does not influence their performances. This implies that students of the North Eastern Polytechnics, make use of their phones and visit cafes for their academic work because they have limited access to the available ICT

facilities in the school. Moreover, access to ICT facilities makes their learning more real and concrete but lack of it does not influence their performances.

**Table 4 Question three frequency on the influence of internet utilization on students' academic performance**

S/N	ITEMS	SA	A	D	SD	TOTAL
23	I use internet to write my assignment	125 36.13%	187 54.046%	20 5.780%	14 4.046%	346 100%
24	I use internet to download materials for my project	126 36.42%	170 49.13%	40 11.56%	10 2.89%	346 100%
25	I use internet to download course materials	103 29.77%	158 45.66%	50 14.45%	35 10.12%	346 100%
26	Students communicate with their lecturers through e-mail	110 31.79%	136 39.306%	94 27.17%	6 1.734%	346 100%
27	Students receive lectures from their lecturers through Zoom	94 27.17%	14 4.046%	110 31.79%	128 36.994%	346 100%
28	Students interact with their lecturers using collaborative tools	53 15.32%	10 2.890%	137 39.595%	146 42.196%	346 100%
29	I use internet to watch and download films	118 4.104%	142 41.040%	66 19.075%	20 5.780	346 100%
30	I use internet to chat and search for new friends	116 33.53%	134 38.728%	78 22.543%	18 5.202%	346 100%
31	The frequent use of internet for academic work improve my CGPA	142 41.040%	136 39.306%	51 14.739%	11 3.179%	346 100%
32	Lack of proper utilization of the internet does not influence my academic performance	123 35.55%	157 45.38%	44 12.72%	22 6.36%	346 100%

## Discussion

Table 4 presents the high percentages of 54.046% (A), 49.13% (A), 45.66% (A), 39.306% (A) from items numbers 23, 24, 25, and 26 respectively. Respondents Agree that they use internet for academic work such as assignments, downloading project and course materials. Percentages of 36.994% (SD), and 42.196 (SD), from items numbers 27 and 28. Respondents Strongly Disagree with the statement that they communicate with their lecturers using email, zoom and other collaborative tools. Percentages of 41.040% (A), and 38.728 (A), from item numbers 29 and 30. Respondents Agree with the statement that they use internet for their personal life, that is to download films and chat with friends. Percentages of 39.306% (A), and 45.38% (A) from items numbers 31 and 32. Respondents Agree that internet improve their GPA. While percentages of 44.5% (A) from item 31 agree that internet does not influence their academic performances. This suggests that students use the internet for both academic and non-academic activities, but they do not use internet to

communicate with their lecturers and that lack of proper utilization of the internet does not influence the academic performances of the students in the North Eastern Polytechnics.

**Table 5 Question four frequency on the influence of social media utilization on students' academic performance**

S/N	ITEMS	SA	A	D	SD	TOTAL
33	I frequently use Facebook for my academic work	90 26.011%	164 47.398%	60 17.341%	32 9.25%	346 100%
34	I frequently use WhatsApp for my academic work	100 28.90%	208 60.12%	32 9.248%	6 1.734%	346 100%
35	I frequently use Twitter for my academic work	120 34.682%	154 44.51%	56 16.184%	16 4.624%	346 100%
36	I frequently use Instagram for my academic work	108 31.213%	156 45.09%	32 9.248%	50 14.45%	346 100%
37	I spend much time on SNS for writing assignments and research	120 34.682%	148 42.774%	28 8.092%	50 28.901%	346 100%
38	I use materials gotten from blogging sites to complement what I have been taught in class	112 32.37%	157 45.38%	35 10.12%	42 12.14%	346 100%
39	I engage in academic discussion on SNS and this has improved my CGPA	139 40.173%	144 41.62%	47 13.583%	16 4.624%	346 100%
40	I spend much time on SNS for chatting with friends	204 58.96%	70 20.231%	60 17.341%	12 3.468%	346 100%
41	There is no improvement in my CGPA since I become engaged into these SNS	134 38.76%	132 38.15%	48 13.87%	32 9.25%	346 100%
42	I usually have unlimited access to SNS and this has distract my study timing.	124 35.84%	130 37.57%	63 18.21%	29 8.38%	346 100%
43	Lack of proper utilization of the social media does not influence my performance	104 30.06%	126 36.42%	69 19.94%	47 13.58%	346 100%

## Discussion

Table 4 shows the high percentages of 47.398 (A), 60.12 (A), 44.51 (A), and 45.09 (A) from items numbers 33, 34, 35 and 36. Respondents Agree with the statement that they use Facebook, WhatsApp, Twitter and Instagram for their academic work. Percentages of 42.774% (A) 45.38% (A), and 41.62% (A) from items numbers 37, 38 and 39. Respondents Agree that they spend much time on Social Media sites, that they use materials from blog and engage in discussion using social media sites for academic activities. Percentages of 58.96 (SA), 38.76% (SA) and 37.57% (A) from items numbers 40, 41 and 42. Respondents Strongly Agree that they spend much time on Social media sites chatting and searching for friends, that there is no improvement in their GPA because of Social media usage and also Agree that unlimited access to SNS

distract their study timing. Percentage of 36.42% (A) from item 43. Respondents Agree that lack of proper utilization of Social media sites does not influence the performances of students in the North Eastern Polytechnics.

### **Conclusion and Recommendation**

Majority of the respondents were from National Diploma Programmed the major ICT infrastructure/facilities for students' learning which are; ICT laboratories, instructional software and stable power supply are lacking/inadequate and this does not influence their performances. This implies that students of the North Eastern Polytechnics, make use of their phones and visit cafes for their academic work because they have limited access to the available ICT facilities in the school. Moreover, access to ICT facilities makes their learning more real and concrete but lack of it does not influence their performances. This suggests that students use the internet for both academic and non-academic activities, but they do not use internet to communicate with their lecturers and that lack of proper utilization of the internet does not influence the academic performances of the students in the North Eastern Polytechnics. Respondents agree that lack of proper utilization of Social media sites does not influence the performances of students in the North Eastern Polytechnics. It can be deduced from the study that; utilization of internet has least chance of influencing (negatively/positively) academic performance of students.

### **Recommendation**

Based on the findings of the study, the following suggestions were made:

1. The government should provide ICT infrastructure to each Polytechnic in the northeast in order to create a suitable learning environment and to enforce integration through regular supervision.
2. The school administration should encourage Polytechnic Lecturers to use ICT facilities appropriately by assuring sufficient supervision and rewarding the highest performing lecturers who comply.
3. The sampled school necessitates the establishment of a virtual library where students can conveniently access scientific and technological articles from databases such as Elsevier, Springer, Taylor & Francis, Wiley, and Emerald. This will reduce their reliance on academic achievement improvement.



## REFERENCES

- Adeosun, A. (2010). Information and communication in education. *International Cooperation in `Education*, 13,
- Ainin, S., Naqahbandi, N., Moghavvemi, S., Jaafar, N. I. (2015). Facebook Usage, Socialization and Academic Performance. *Comput. Edu.*, 83, 64-67.
- Akinleke, W. (2017). Impact of family structure on the academic performance of secondary school students In Yewa Local Government Area of Ogun State, Nigeria [Electronic Version] *International Journal of Sociology and Anthropology Research* 3, 1-10.
- Ali, N., Jusoff, K., Ali, S., Mokhtar, N. & Salamt, A.S.A. (2009). The factors influencing students' performance at Universiti Teknologi MARA Kedah, Malaysia. *Canadian Research & Development Center of Sciences and Cultures*, 3 (4), 1-14.
- Andoh, C. (2012). Factors influencing teachers' adoption and integration of information and communication technology into teaching [Electronic Version] *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 136- 155.
- Ashley, W. (2016). 10 reasons today's students need technology in the classroom. Retrieved from <http://www.seccuredgementworks.com/10ReasonsToday's-students-Need-T>
- Azizi, S. M., Soroush, A. & Khatony A. (2019). The relationship between social networking addiction and academic performance in Iranian students of medical sciences: A cross-sectional study. *BMC Psychology*. Retrieved from <https://doi.org/10.1186/s40359-019-0305-0>.
- Creswell, J. W. (2010). *Educational Research Planning, conducting and evaluating quantitative and qualitative research*. (4<sup>th</sup> Ed.). Pearson Merrill Prentice Hall, New Jersey.
- Dan, C. & Sherlock, C. (2008). *Introduction to Regression and Data Analysis*. Stat lab workshop. Retrieved via: <http://www.yale.edu/statlab>.
- Díaz-Morales, J. F., & Escribano, C. (2015). Social jetlag, academic achievement and cognitive performance: Understanding gender/sex differences. *Chronobiology international*, 32(6), 822- 831.

- Eke, H. N., Omekwu, C. S., & Odoh, J. N. (2014). The use of social networking sites among the undergraduate students of the University of Nigeria, Nsukka. *Library Philosophy and Practice* (e-journal), paper 1195. <http://digitalcommons.unl.edu/libphilprac/1195>.
- Gambari, A. I., & Adaeze, C. O. (n.d). Availability and Utilization of Information and Communication Technology (ICT) Facilities in Higher Institutions in Niger State, Nigeria. *International Journal of Information and Communication Technology*, 4(1), 34-46. <https://staff.futminnna.edu.ng/EDT/content/journal/PF0890/70.pdf>
- Greenfield, P. and Subrahmanyam, K. (2008). Online communication and adolescent relationships. *The Future of Children*, 18, 119-140. Retrieved from: <http://www.futureofchildren.org>.
- Hair, J. F., Black, W. C., Balin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. Maxwell Macmillan International Editions.
- Harkness, J. A. (2008). Comparative Survey research: Goals and Challenges. In E. de Leeuw, J. J., Hox, & D. A. Dillman (Eds.). *International handbook of survey methodology* (pp 56-77). Psychology Press Taylor & Francis Group.
- Harkness, J. A., Villar, A. B., Edwards, B. (2010). Translation, adaptation, and design. In J. A. Harkness, M., Braun, B., Edwards, T. P., Mohler, B. E., Pennell, T. W., & Smith (Eds). *Survey methods in Multinational, multiregional, and Multicultural Contexts*. (pp. 115-140). John Wiley & Sons.
- Humbhi, S. & Tareem, S. (2021). Measuring the Impact of ICT on Students' Academic Performance: Evidence from Higher Education Institutions of Remote Areas of Pakistan. *University of Nebraska, Lincoln. Library Philosophy and Practice* (e-journal) 5476. <https://digitalcommons.unl.edu/libphilprac/5476>.
- Islam M.S and Fouji M . H (2010) *The Impact of ICT on Student's Performance. A Case Study of ASA University Bangladesh. ASA University Review*, 4(20), pp. 101-106. Retrieved from <https://www.researchgate.net>
- Ismail, I. (2018). Seminar paper on the Impact of ICT on students' Performance in Public Secondary Schools in Ekiti Local Govt., Kwara state, Nigeria. Doi:10.13140/RG.2.2.20463.94882. <http://www.researchgate.net/publication/324363679>.
- Khan, M. S., Khan, I., Din, S., Ismail, H. M., Khattak, R., & Jan, R., (2015). The Impact of ICT on the students' Performance: A Review of Access to information. *Gomal University, Dera Ismail Khan, Pakistan. Research on Humanities and Social Sciences*. ISSN:2224-5766, Vol. 5 (1), 2015.
- Kimanzi, P. R., Bwire, A., Miima, F., (2018). Influence of Teacher Feedback Technique on Students'

Essay Writing Skills in the English Language in Secondary Schools in Nairobi County, Kenya.  
School of Education Department of Educational Communication and Technology.

- Kiri. I., J., & Obinichi, W. (2019). Perceived Influence of Information Communication Technology on Academic Performance of Social Studies Students in Secondary Schools in Port Harcourt Metropolis, Nigeria. *International Journal of Innovative Information Systems & Technology Research*, Vol. 7 (30:42-63 2019.ISSN: 2467-8562.SETHI PUBLICATIONS, 2019.[www.seahipaj.org](http://www.seahipaj.org).
- Lahiry, S., Choudhury, S., Hazra, A. (2019). Impact of social media on academic performance and interpersonal relation: A cross-sectional study among students at a tertiary medical center in East India. *Journal of Education and Health Promotion*. Wolters Kluwer-Medknow Publications. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc>
- Maksy, M. M., & Rodriguez, C. (2017). Motivation and distraction factors associated with student performance in auditing: An empirical study at a residential university. *Journal of Accounting and Finance*, 17(70, pp. 174-193.Retrieved from <https://www.researchgate.net>.
- Neyland, E. (2011). Integrating online learning in NSW secondary schools: Three schools' perspectives on ICT adoption [Electronic Version] *Australasian Journal of Educational Technology* 27
- Ngoumandjoka, U. (2012). Correlation between Internet Usage and Academic Performance among University Students. University of the Witwatersrand, Johannesburg.
- Nwachukwu, G. N. (2011). *Electronic Commerce: Principles, Methods, and Implementation in L.O.* <http://www.seahipaj.org>. Retrieved Nov. 2021.
- Olatokun, W. M. (2008). Internet access and usage by secondary school students in a Nigerian Municipality. Retrieved from <http://sajlis.journals.ac.za/pub/article/view/1295/1225>.
- Ozee, G., and Yilmaz, E. (2011). Comparison of the theory of reasoned action and the theory of planned behavior: An application on accountants' information technology usage. *African Journal of Business Management* 5, 50-58.
- Raut, V. & Patil, P. (2016). Use of Social Media in Education: positive and Negative impact on the students. *International Journal on Recent and Innovation Trends in Computing and Communication*, Vol. 4pp.281-285.Retrievedfrom <http://www.ftms.edu.my/journals/index.php/journals/ijelt>. Retrieved Nov. 2021.
- Robson, C. (2011). *Real World Research: A Resource for users of social Research Methods in Applied Settings*, (2<sup>nd</sup> Ed.). Sussex, A., John Wiley, and Sons.

- Salehi, H. & Salehi, Z. (2012). Integration of ICT in language teaching: Challenges and barriers. 3<sup>rd</sup> International Conference on e-Education, e-Business, e-Management and e-Learning IPEDR Vol.27 IACSIT Press, Singapore. Retrieved from <http://www.pedr.com/vol27/40-IC4E%202012-F10037.pdf>
- Salvation, M & Adzharuddin, N. A . (2014, August). The influence of social network sites (SNS) on the academic performance of Malaysian students. *International Journal of Humanities and Social Science*, 4(10[1]), 131-137.
- Sanchez, C., J., J., & Aleman, E. C. (2011). Teachers' opinion survey on the use of ICT tools to support attendance-based teaching. *Journal of Computers and Education*, 56(3), 911-915. Retrieved from <http://www.sciepub.com> Nov. 2021.
- Showkat, N., & Parveen, H., (2017). Quantitative Methods: Survey. Aligarh Muslim University. <http://www.researchgate.net/publication/318959206>.
- Sieman, G. (2015). Connectivism: Learning as network-creation. *International Journal of Instructional Technology and Distance Learning (ITDL)*. Retrieved from <http://www.elearnspace.org/articles/networks.htm>
- Tinio, V. I. (2002). ICT in Education: UN Development Programm. Retrieved from <http://www.eprmers.org>. Nov. 2021.
- Ullah, M. A., Allam, M. M., Alahi, A. S. A., Rahman, M. M., Masum, A. K. M., & Akter, N. (2019). Impact of ICT on students' Academic performance: Apply Association Rule Mining and Structured Equation Modeling. *International Islamic University Chittagon Bangladesh. International Journal of Advanced Computer Science and Applications (IJACSA)* Vol. 10 (8) 2019. Retrieved from [www.ijacsa.thesai.org](http://www.ijacsa.thesai.org).
- Wondemtegegn, S. (2018). University Students Perception and Utilization of Technology for Learning: The Case of Haramaya University. *Online Journal of Communication and Media Technologies* 8, 130-149.
- Yu, A. Y., Tian, S. W. Rogel, D., Kwok, R. C. (2010). Can Learning be Virtually Boosted? An Investigation of Online Social Networking Impacts. *Comput. Edu.* 55, 1494-1503.