Network for Research and Development in Africa
International Journal of Information, Technology & Innovation in Africa
ISSN: 2360-9772, Volume 12, Issue 6
PP 40-55 (December, 2023)
DOI: 6732-0-183-066-35-1263
arcnjournals@gmail.com
https://arcnjournals.org

Effects of ICT Resources Usage to Enhance Teaching, Learning and Entrepreneurial Development Training in the North-Eastern Polytechnics

Sani Yakubu Poplong
Department of Office Technology and Management, Gombe State Polytechnic Bajoga
Mohammed Ahmad Umar
Department of Office Technology and Management, Gombe State Polytechnic Bajoga

Abstract: *Education at its most basic stalks from a desire to preserve society to the changing environments signified by new educational approaches, this study aimed at investigating the use of ICT resources to enhance teaching, learning and entrepreneurship development in some selected Polytechnics in North-eastern States. Social improvement can be achieved by education as Information and Communication Technologies have become an integral part in all aspects of life which enables building of public and private research and development centers, online presence, interact with customers and donors more effectively and reach out to new audiences in addition to franchising, marketing, licensing and niche opportunities. The data for the study was generated from survey and questionnaire were distributed and retrieved. The basic resource theory was used. The data generated was presented using tables and simple percentage technique. The findings of the studies revealed that ICT Resources usage to enhance Teaching, Learning and Entrepreneurial Development Training in the north-eastern Polytechnics is facing myriads challenges, it is therefore recommended that the relevant authorities concerned should put more efforts to improve the standard of ICT laboratories in their respective institutions. Mush appreciation to TEDFUND for funding this research work.*

Keywords: *Effect, ICT Resources Usage, Enhance, Teaching, Learning, Entrepreneurial, Development, Training, north-east, Polytechnics.*

Introduction

The curriculum created in educational centers of learning has included the acquisition of skills in using technology to find, evaluate, store, produce, present, and exchange information because educational systems around the world are becoming more and more concerned with students' digital competency (Gil-Flores et al., 2017). Information and communication technology (ICT) supported by electronic technology has a wide range of effects on various aspects of life, including education. When used effectively, it can increase learning and knowledge on local, national, and international levels, respectively (Realm, 2019). The use of information and communication technologies (ICT) has been steadily rising in developing nations. The integration of computers and related technologies into the classroom usher's students into the information era and promises to expand their horizons.

Like many other nations, the majority of African nations think that information and communication technology (ICT) can significantly contribute to social, political, and economic development in the nation as well as to preparing students for the workforce (Peprah, 2016). Education, in the opinion of Monira Sultana and Haque (2018), is the key to any society's development and advancement. Economic growth and technological innovation can be fostered, encouraged, and established by human capital. Education is a means of achieving social improvement. The use of information and communication technologies has permeated every aspect of daily life. Entrepreneurial developments in the areas of internet service provision, telecommunications equipment and services, information technology equipment and services, media and broadcasting, libraries, and documentation are covered in a 1999 United Nations report on ICTs.

In the current technological era, information and communication technology (ICT) is the most significant and powerful tool, influencing every aspect of human existence (Zafar, 2019). It has brought about global integration and altered every aspect of the political, social, economic, and educational landscape. According to Suroyo (2020), the advancement of science and technology, specifically the development of Information and Communication Technology (ICT), has led to the creation of new customs and cultures within human civilization. The idea that ICT can be leveraged to raise the standard of instruction and learning within the educational system is also widely acknowledged (Yusuf 2005). The information age has given way to the knowledge age in human society due to the widespread use and quick development of ICT. Emphasizing the value of ICT use in the classroom,

Information and Communication Technology (ICT) employs a wide range of technologies to gather, store, edit, retrieve, and transfer information in different formats. This is so that, with the aid and support of ICT elements and components, effective learning can be achieved through the use of technology in education, which greatly contributes to the pedagogical aspects of this field (Jamieson-Proctor *et al.*, 2013). ICT has become a more important component of national development and worldwide competitiveness in the field of education over the past few decades, impacting all facets of human endeavors. It is applied globally to develop concepts into attainable objectives and then turn those objectives into tangible accomplishments. ICT has the capacity to make a significant enhancement to the educational system Mourstund (2011). Even though ICT has a big impact, not much of this potential has been realized. According to Pears (2007), the education system has benefited from innovations in teaching and learning as well as advancements in the study of how people learn, which have led to a reevaluation of the way education is structured.

The role of ICT is crucial in achieving the objectives of education outlined in the national education policy. These objectives aim to contribute to national development by providing high-level training, developing individuals' intellectual abilities to comprehend their surroundings, and offering opportunities for individuals to acquire the skills needed to be self-reliant and productive members of society. ICT encompasses the processing and sharing of information using various technologies for the manipulation and communication of information. Aribasala (2014) noted that ICT plays a growing role in organizations and society's ability to produce, access, adopt, and apply information. ICT significantly impacts teaching and learning, and its use in the classroom, availability of ICT facilities, and student utilization of ICT outside the classroom are crucial. Various ICT tools, such as Computer

Aided Instruction (CAI), contribute to effective teaching and learning. The ability to use ICT effectively has become an essential part of education. Studies on the impact of ICT on teaching and learning have been conducted in different educational levels, including tertiary institutions, senior secondary schools, and junior secondary schools. These studies highlight the importance of ICT in the teaching and learning process. This study, conducted in selected polytechnics in the North Eastern region of Nigeria, aims to address the existing gap and contribute to the integration of ICT in teaching and learning.

Statement of problems

The world is becoming more digital as a result of the widespread use of ICT resources such as laptops, computers, tablets, smartphones, and a variety of other devices. According to Saba *et al.* (2022), organizations in most countries are going digital, and educational institutions are adopting ICT-based teaching and learning so that people can enjoy using (ICT) in education as a technique of teaching, learning, and entrepreneurial development. Students can learn about computers through this method. However, the majority, if not all, of the local governments in the region have adopted Information and Communication Technology (ICT) in their operational processes without much thought or updating of actual needs, implementation strategies, or limited or poor information infrastructure toward ICT application, particularly entrepreneurial development. as well as Similarly, the majority of expert teachers work in urban areas with all modern facilities, whereas rural dwellers who attend remote tertiary institutions know little about computer basics, applications, networking fundamentals, communication devices, Internet, programming fundamentals, and so on. In effect, ICT is emerging as a tool that can complete and enrich educational systems, and ICT education is essential for modern education and leading a modern life.

Similarly, an important potential need for ICT is to promote the inclusion of students with disabilities in education without removing all barriers (non-adapted facilities, discrimination against students with disabilities, gender civilization, and so on). The use of ICT in inclusive education programs thus complements other actions aimed at removing these barriers.

Research Questions

Against this background, the overall research question that this thesis seeks to answer is:

How Effect is the level of ICT Resources usage in enhancing Teaching, Learning and Entrepreneurial Development training in your institution*?*

1. What is the situation of ICT in the institution?
2. What are the challenges that the entrepreneurial training face in relation to ICT in the institution?
3. How adequate is the provision of ICT resources in the institution?
4. How effective is the ICT resources usage in teaching and learning in the institution?

Aim and Objectives of the study

This study aims at increasing our understanding of how ICT-based teaching, learning and entrepreneurship may improve the economic conditions in the North Eastern states.

i. To evaluates the situation of ICT resources related to teaching and learning.

ii. To assess challenges that the entrepreneurial training faces in relation to ICT.
iii. To ascertain the adequacy in provision of ICT resources in the institutions.
iv. To determine effectiveness of ICT resources usage in teaching and learning in the institution.

Definitions and delimitations

Entrepreneurship is a broad term and many different definitions are common. This thesis uses a Schumpeterian (1911/1968) definition of an entrepreneur as "anyone who introduces an innovation to the market", this definition includes Non-Governmental Organizations (NGOs) and non-commercial ventures. Further it will only include small and micro businesses with less than 50 employees. The study limits itself by analyzing the entrepreneurial spirit related to ICT. It is the perspective of the entrepreneurs that is of interest and that is being presented. This has many advantages as well as disadvantages; the main issues connected with this are concerned with the methodological aspects of acquiring the right information in the field.

Methodology

The study adopted an interview and questionnaire survey research design. The survey research was considered the most appropriate for collecting authentic data for describing a population that is too large to observe directly as it is with this study. The population of the study is 1,503. The population of this study will comprise both males and females as they benefit from the use of ICT facilities in their respective institutions. The eligibility for inclusion in to this study is that the respondent must be a student from the selected polytechnics and must be in his/her third semester in the institution. For this study, three hundred and sixty (360) students were selected as sample size from the selected polytechnics.

The selected polytechnics are as follows: Gombe state polytechnic, Bauchi state polytechnic and Adamawa state polytechnic.

This number of 360 has been chosen according to likert simple percentage formula.

Where:

$$\frac{\text{Number of Responses}}{\text{number of Respondents}} \times \frac{100}{1}$$

Conceptual clarification of ICT

ICT is an umbrella term that encompasses any communication device, including radio, television, cell phones, computer and network hardware, satellite systems, and so on, as well as the various services that go with them, such as video conferencing and distance learning. "ICT is frequently used to refer to a specific context, such as ICTs in education, health care, or libraries." "ICTs are frequently spoken of in a specific context, such as ICTs in education, health care, or libraries," writes Margaret R. According to Abe and Adu (2007), "ICT refers to technologies that provide access to information through communications." It's comparable to information technology (IT). However, it is primarily concerned with communication technologies. This includes the internet, wireless networks, cell phones, and other forms of communication."

Theoretical frame work

The Influence of ICT on Learning and Achievement

According to Agomuo, E.E. (2011), "there is widespread belief that ICTs can and will empower teachers and learners, transforming teaching and learning processes from being highly teacher-dominated to student-centered, and that this transformation will result in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, informational reasoning skills, communication skills, and critical thinking skills." However, there is currently very little unambiguously compelling data to back up this belief. ICTs are rarely regarded as being central to the overall learning process. "Even in the most advanced schools, ICTs are not generally regarded as central to the teaching and learning process." There are numerous ICT in education initiatives aim to prioritize ICTs over education, at least rhetorically. This is an ongoing issue that puts technology before education. "One of the persistent challenges of technology use in education is that educational planners and technology advocates think of the technology first and then investigate the educational applications of this technology only later," according to Corkery (2011).

ICT's Effect on Students' Academic Performance

Positive effects are more likely to be associated with education. "It is believed that specific uses of ICT can have positive effects on student achievement when ICTs are used appropriately to complement a teacher's existing pedagogical philosophies," stated Abe, T. O., and Adu, E.T. (2007). In certain areas, "Computer Aided Instruction" has been observed to marginally enhance student performance on multiple-choice, standardized tests. It has been demonstrated that computer-aided (Assisted) Instruction (CAI), which generally refers to student self-study or tutorials on PCs, slightly improves student test scores on some math and reading skills. However, it is questionable whether this improvement truly translates to improved student learning. Goals must be specific. When the objectives for using ICTs are unclear, they are perceived as being less effective, or even ineffective. While such a claim would seem self-evident, Canoy, M. (2004) contended that "in practice, the specific goals for ICT use in education are are often only very broadly or rather loosely defined." According to Agbo, C.A. (2011), there is a significant conflict between standardized testing and traditional versus "new" pedagogies. More "constructivist" pedagogical styles are thought to be less effective in preparing students for standardized testing, which typically measures the outcomes of such teaching practices, than traditional, transmission-type pedagogies. ICT use is widespread these days, particularly in higher education, and can be influenced by a wide range of factors, according to Bansa and Asrini (2020). ICT use is beneficial and useful for lecturers to improve student learning and their own teaching performance, which influences opportunities for entrepreneurial development. Technology use in the classroom is becoming more and more significant, even though it is still not widely used by lecturers. Consequently, it's critical to understand how instructors feel about the challenges and demands of using ICT in a changing economic environment. According to Sutoyo (2020), the advancement of science and technology, especially the development of information and communication technology (ICT), has given rise to new customs and cultures within human civilization.

Shamim and Raihan (2016) conducted a survey among faculty members at Bangladesh's government polytechnic institutes to determine the efficacy of using ICT to

support teaching and learning. The researchers discovered that the main obstacles to raising the standard of ICT technical education are a lack of ICT proficiency among educational personnel, inappropriate instructional materials, insufficient motivational strategies, and a lack of ICT training for teachers. ICT use in education has a lot of advantages. According to research, for instance, integrating ICT into the classroom encourages students to participate more actively in their education. Globally, information and communication technology, or ICT, has transformed manufacturing, education, health care, and communication (Saba et al., 2022).

business ventures Numerous studies have shown that investing in ICT fosters the growth of entrepreneurial businesses, which in turn lowers the high unemployment rate among Nigerian graduates. Entrepreneurial business development is a solution for reducing poverty and creating jobs. According to Dabo (2021), the emergence of entrepreneurial businesses has become more significant and important as a driver of economic growth, development, and job creation. ICT has helped entrepreneurs communicate more effectively and run their businesses more efficiently. Approximately 80% of graduates from the majority of Nigerian universities struggle to find work each year, according to Undiyaudaye and Otu (2015), which has led to a high number of impoverished people. ICT tools are essential for entrepreneurs to use because they will reduce the time and expense of traveling to market and advertise their goods. With ICT, they can advertise their products without having to interact with customers in person and still get quick feedback from them. ICTs are a useful tool for enhancing the capacities for producing, gathering, analyzing, and interpreting information, all of which are essential for entrepreneurial activity, according to (Gomes and Lopes, 2022).

ICT as a tool for Graduates in Entrepreneurial Field.

Graduate is an individual who is expected to be grounded with ICT skill and other related skills in the area of specialization such as Team building, Book keeping skills, Analytical and Problem solving skills, Decision making skills and Listening/Communication skills, Computer skills including ability to operate computerized accounting, spreadsheet and word processing programme at a high proficient level, stress management skills and time management skills.

ICT-based entrepreneurial skills for office

The role of graduates in information and communication technology has expanded with the office's computerization. For a graduate to stay relevant in today's offices, they must therefore be proficient in ICT. Information and communication technology, including telecommunication, satellite, computing (software), the internet, and global systems of mobile communication (GSM), was defined by Rahman (2002) as the technology of creation, processing, storage, retrieval, and transmission of data and information. Additionally, there are millions of computers that have been connected or brought together worldwide so they can communicate with one another, share information from the internet, and exchange messages. The internet is a vital source of electronic resources for research, teaching, and learning.

A computer is a device that can receive input, apply processes to it, and output the results of those processes, according to Onyewuenyi (1994). Input and output devices,

storage, arithmetic, logical, and control units are typically included. These days, computers are used in conjunction with telecommunications devices such as satellite, tax, and telephone modems to send data at a speed never before possible. He continued by saying that information is gathered, stored, and processed by computers, and that information is transmitted to potential locations for use by computer-controlled telecommunications devices. According to Berenfield (1999), ICT has altered how people live, work, and play in developed nations. The majority of developed nations have taken advantage of ICT's potential to change the educational environment in their higher education, secondary education, and even primary education—especially in terms of the instructional process. ICT presents a chance to transform our workplaces, increase access to high-quality education and training, and enhance organizational management across a range of industries.

ICT is defined by Lucy (1990) in Aja (2002) as the collection, processing, storing, and sharing of audio, visual, textual, and numerical data using a microelectronic-based computing and communication system. Technology for information and communication has already had a significant impact on office jobs. One of the office jobs that greatly benefits from information technology is secretarial practice. The executive secretary oversees the flow of organizational information from point of origin to point of storage in his/her capacity as the office information coordinator. Global business practices have changed and innovated recently, to the point where manually operated machines have been replaced by electronic ones (Folahan, 2003; Umemezia, 2003). noted that the range of business activities is being significantly impacted by the technological revolution. Information and communications technology is one of these fields where a technological revolution has occurred (Fasae, 2003). The operation of information and communication technology (ICT) has made information recording, processing, retrieval, and transmission easier and faster.

Literacy in Computer Technology

Computer literacy is expected to contribute to both academic and job performance (Davis, 1999). Instructors in schools expect their students to have a certain level of computer knowledge at the start of their studies (Hirschbuhl and Faseyitan, 1994) and when they graduate (Furst-Bowe, Boger, and Franklin, 1995). On the job market, companies' recruiters reported that basic computer skills are very important for job employability to new college graduates (Davis, 1997). Ndahi and Gupta (2000) explained that this is because employees have better prospects of receiving specific training on the job and are more successful in their field. As a result, employers look for computer skills in almost everyone they hire (Ndahi and Gupta, 2000). The applicant who lacks computer skills has serious disadvantages, both in terms of obtaining a job and in terms of qualifications Promotion (Martin, Carrier and Hill, 1997).

To meet the need of graduates with computer skills, it is important to determine what constitutes desired computer skills and how they should be taught. Tucker and Garnick (1991) argued that computer literacy course should be characterized by emphasizing the use of computers as a tool in society. Ndahi and Gupta (2000) conducted a survey on computer literacy in the-job training and the results suggested that word processing was the most needed skill. The report also showed a strong Interest in learning how to manage files and create a PowerPoint presentation. The claim to know the database as well as demand in manipulating software also increased. These results were consistent with the study by Furst-

Bowe, Boger and Franklin. (1995), which states that knowledge of word processing, spreadsheets, database management, graphics and information retrieval is required for many jobs. Regarding teaching strategies, previous studies have found that students learn more when they are allowed to work together in a lab or when they receive informal peer tutoring and support. (Davis, 1999).

Basic Operational Process of Computer

a) A computer is an electronic device that can be programmed with instructions and is capable of receiving, retrieving, and processing data, according to Nweke (2007). He went on to say that a computer is an electronic device that processes data as input, outputs the results, and receives data as input again. A computer is a device that can be programmed with instructions and has the ability to receive, process, store, and retrieve data.
b) **Input**: Most computers cannot accept data in forms customary to human communication such as speech or handwritten documents. It is necessary therefore, to present data to the computer in any way that provides easy conversion into its own electronic pulse based forms. This is commonly achieved by typing the data into keyboard device that converts into machine – sensible forms. A keyboard device is just one of the many kinds of input device. The mouse can also be used to input. In some cases, machine – readable documents or media are produced as part of the input process. Data finally enter storage.
c) **Storage:** Data and instructions enter main storage and are held until needed to be worked on. The instructions dictate action to be taken on the data. Result of action will be held until are required for output.
d) **Control:** Each computer has a control unit that fetches instructions from main storage, interprets them and issues the necessary signal to the components, making up the system. It directs all hardware operation necessary in obeying instructions.
e) **Processing:** Instructions are obeyed and the necessary arithmetic operations etc, are carried out on the data. The part that does it is called the Arithmetic logic Unit (ALU). In addition to the arithmetic, it also performs so-called logical operations. This operation takes place incredibly as a high-speed e.g. 10 million numbers may be totaled in one second.
f) **Output:** Results are taken from main storage and fed to an output device. This may be a printer, in which case the information is automatically converted to a printed form called hard copy. Or alternatively data may be displayed on the monitor screen similar to that used in the television set (Osuwa, 2002).

The Online Proficiencies

Proficient in using the internet is one of the information and communications technologies that should owned. As a global computer network, the internet has made the world seem like a small village. The internet was defined by Agbo (1999) as a global collection of interconnected computer networks. It links a wide range of networks—private, business, public, and academic—including an increasing number of home computers. Teaching and learnigg of today must deal with the concepts of internet connectivity, email, website navigation, and using search engines to find information, all as a consumer of the vast resources available on the internet. The word "internet" refers to any grouping of

networks into wider WAN, or wide area network. The world's largest computer network is the Internet, also referred to as the NET, cyberspace, or the information superhighway. As networks, which are collections of interconnected computers that let users exchange gear and data.

2) E-mail
3) Internet Relay Chart
4) Public voice messaging
5) Video conferencing
6) Mobile Telephone system
7) Internet Address and Host Address.

The emergence of Internet represents a major new phase in human development, one in which potentially all knowledge is available to all citizens. It differs from other mass media both in its global nature and in that it supports participation from all with access that is, it is a truly many-to-many medium. The Internet is predicted to be as radical as the industrial revolution (Agomuo, 2005). According to Agomuo (2005), the Internet, sometimes called simply "the net" is a world-wide system of computer networks – a network of networks in which users at one computer can, if they have permission, get information from any other computer (and sometimes talk directly to the users at other computers).

Presentation and Analysis of Data

This chapter present analysis of data collected from the questionnaire distributed. A total number of sixty (375) questionnaires were administered to the respondents and fifty-five (360) were recovered for analysis, and the summaries are presented in tables to highlight the findings. The presentation started with the personal data from section A of the questionnaire and section B, the structured questionnaire in which 16 questions were formed from the research questions.

Data Analysis

Table 1: personal data

S/NO	Items	Frequency	Percentages %
1.	**Gender:**		
	Male	201	54.%
	Female	174	46.4%
	Total	**375**	**100%**

Data in table one shows that 201 representing (54. %) of the students are males while 174 representing (46.4%) are females.

Research question one: What is the situation of ICT in the institution?
Analysis of data relating to question 1 is presented in Table 2.
Table 2.

Questions	Response Option	Number of Respondents	Percentages %
Question one: The situation of ICT in your institution is excellent.	Strongly Agree	79	22
	Agree	81	23
	Disagree	105	29.1
	Strongly Disagreed	95	26.3
	Total	**360**	**100%**
Question two: CT related courses are readily available in the institution.`	Strongly Agree	136	38
	Agree	97	27
	Disagree	76	21.1
	Strongly Disagree	51	14.1
	Total	**360**	**100%**
Question three: Power supply is always stable in the ICT rooms for excellent training.	Strongly Agree	75	21
	Agree	76	21.1
	Disagree	186	52
	Strongly Disagree	23	6.3
	Total	**360**	**100%**
Question four: ICT rooms in the institution are all connected to internet.	Strongly Agree	98	27.2
	Agree	62	17.2
	Disagree	107	29.7
	Strongly Disagree	93	26
	Total	**360**	**100%**

Data Analysis of Table 2

Research question one which has four questions shown in table 2 above, shows that in question one (1), 79 respondents representing 22% strongly agreed that The situation of ICT in your institution is excellent, 81 respondents representing 23% agreed with the same statement. While 105 respondents representing 29.1% disagreed with the same statement and 95 respondents representing 26.3% strongly disagreed with the same statement. Question (2) revealed that 136 respondents representing 38% strongly agreed that CT related courses are readily available in the institution. 97 respondents representing 27% agreed with the same statement, while 76 respondents representing 21.1% disagreed the same statement and 51 respondents representing 14.1% strongly disagreed with the same statement. Question (3) indicates that 75 respondents representing 21% strongly agreed that Power supply is always stable in the ICT rooms for excellent training. 76 respondents representing 21.1% agreed with the same statement. While 186 respondents representing 52% disagreed with the statement and 23 respondents representing 6.3% strongly disagreed with the same statement. Question (4) also revealed that 98 respondents representing 27.2%

strongly agreed that ICT rooms in the institution are all connected to internet. 62 respondents representing 17.2% agreed with the statement. While 107 respondents representing 29.7% disagreed with the statement and 93 respondents representing 26% strongly disagreed with the same statement.

i. **Findings:** It has been seen from the research carried out that the situation of ICT is below expectation.

Research question two: What are the challenges that the entrepreneurial training faces in relation to ICT in the institution?

Analysis of data relating to research question (2) is presented in Table 3.

Table 3.

Questions	Response Option	Number of Respondents	Percentages %
Question five: There is shortfall for devoted staff to handle the training of ICT.	Strongly Agree	85	24
	Agree	75	21
	Disagree	94	26.1
	Strongly Disagreed	106	29.4
	Total	**360**	**100%**
Question six: Access Internet connectivity is frequently not available for ICT training..	Strongly Agree	91	25.2
	Agree	156	43.3
	Disagree	57	16
	Strongly Disagree	56	16
	Total	**360**	**100%**
Question seven: There is lack of Entrepreneurial related software for ICT training on the computer system.	Strongly Agree	105	29.1
	Agree	95	26.3
	Disagree	74	21
	Strongly Disagree	86	24
	Total	**360**	**100%**
Question eight: Having difficulties to have access to the computer room in the institution.	Strongly Agree	98	27.2
	Agree	108	30
	Disagree	86	24
	Strongly Disagree	68	19
	Total	**360**	**100%**

Data Analysis of Table 3

Research question two (2) which has four questions as shown in table 3 above indicates that in question five (5), 85 respondents representing 24 strongly agreed that there is shortfall for devoted staff to handle the training of ICT. While 75 respondents representing 21% agreed with the same statement, 94 respondents representing 26.1% disagreed with the same statement and 106 respondents representing 29.4% strongly disagreed with the same statement. Question (6) revealed that 91 respondents representing 25.2% strongly greed that access to Internet connectivity is frequently not available for ICT training. 156 representing 43.3% agreed with the same statement. While 57 respondent representing

16% disagreed with the same statement and 56 respondents representing 16 strongly disagreed with the same statement. Question (7) indicates that 105 respondent representing 29.1% strongly agreed that There is lack of Entrepreneurial related software for ICT training on the computer system. 95 respondents representing 26.3% agreed with the same statement. While 74 respondents representing 21% disagreed with the same statement and 86 respondents representing 24 strongly disagreed with the same statement. Question (8) also revealed that 98 respondents representing 27.2% strongly agreed that there are difficulties having access to the computer room in the institution. 108 respondents representing 30% agreed with the same statement while 86 respondents representing 24% disagreed with the same statement and 68 respondents representing 19% strongly disagreed with the same statement.

Findings: The research revealed that entrepreneurial training faces myriad of challenges in relation to ICT in the institution.

Research question three: How adequate is the provision of ICT resources in the institution?

Analysis of data relating to research question (3) is presented in Table 4.

Table 4.

Questions	Response Option	Number of Respondents	Percentages %
Question nine: There are sufficient computer in all the computer rooms in the institution.	Strongly Agree	88	24.4
	Agree	98	27.2
	Disagree	75	21
	Strongly Disagreed	99	28
	Total	**360**	**100%**
Question ten: Computer peripheral devices are readily available for ICT training.	Strongly Agree	83	23
	Agree	93	26
	Disagree	109	30.1
	Strongly Disagree	75	21
	Total	**360**	**100%**
Question eleven: Students can have access to internet service in all locations in the institution.	Strongly Agree	55	15.2
	Agree	42	12
	Disagree	108	30
	Strongly Disagree	155	43
	Total	**360**	**100%**
Question twelve: Computer facilities in the ICT rooms are up to date.	Strongly Agree	101	28
	Agree	99	27
	Disagree	92	26
	Strongly Disagree	68	19.4
	Total	**360**	**100%**

Data Analysis of Table 4

Research question three (3) which has four questions as shown in table 4 above indicates that in question nine (9), 88 respondents representing 24.4% strongly agreed that There is sufficient computer in all the computer rooms in the institution, 98 respondents

representing 27.2% agreed with the same statement while 75 respondents representing 21% disagreed with the statement and 99 respondents representing 28 strongly disagreed with the same statement. Question ten (10) revealed that 83 respondents representing 23% strongly greed that Computer peripheral devices are readily available for ICT training. While 93 representing 26% agreed with the same statement, 109 respondents representing 30.1% disagreed with the statement and 75 respondent representing 21 strongly disagreed with the same statement. Question eleven (11) revealed that 55 respondents representing 15.2% strongly agreed that Students can have access to internet service at all locations in the institution, 42 respondents representing 12% agreed with the same statement. While 108 respondents representing 30% disagreed with the same statement and 155 respondent representing 43 strongly disagreed with the same statement. Question twelve (12) also revealed that 101 respondents representing 28% strongly agreed that Computer facilities in the ICT rooms are up to date, 99 respondents representing 27% agreed with the same statement. While 92 respondent representing 26% disagreed with the same statement and 68 respondents representing 19.4% strongly disagreed with the same statement.

Findings: The research carried out also discovered that there is inadequate provision of ICT resources in the institution.

Research question four: Q 4 How effective is the ICT resources usage in teaching and learning in the institution?

Analysis of data relating to research question 4 is presented in Table 5.

Table 5.

Questions	Response Option	Number of Respondents	Percentages %
Question thirteen: An ICT trainee can send and receive E-mail on the computer system after the training.	Strongly Agree	109	30
	Agree	98	27.2
	Disagree	61	17
	Strongly Disagreed	92	26
	Total	**360**	**100%**
Question fourteen: A trainee can advertise and make purchase on the internet after the training.	Strongly Agree	115	32
	Agree	108	30
	Disagree	85	24
	Strongly Disagree	52	14.4
	Total	**360**	**100%**
Question fifteen: A trainee can type and print out a hard copy on the computer system after the training.	Strongly Agree	92	26
	Agree	210	58.3
	Disagree	28	8
	Strongly Disagree	30	8.3
	Total	**360**	**100%**
Question sixteen: A trainee can identify different types of websites to use on the internet after the training.	Strongly Agree	208	58
	Agree	130	36.1
	Disagree	7	2
	Strongly Disagree	15	4.1
	Total	**360**	**100%**

Data Analysis of Table 5

Research question four (4) which has four questions shown in table 5 above, shows that in question thirteen (13), 109 respondents representing 30% strongly agreed that an ICT trainee in the institution can send and receive E-mail on the computer system after the training. 98 respondents representing 27.2% agreed with the same statement, while 61 respondents representing 17% disagreed with the statement and 92 respondents representing 26% strongly disagreed with the statement. Question fourteen (14) revealed that 115 respondents representing 32% strongly greed that A trainee can advertise and make purchase on the internet after the training. 108 representing 30% agreed with the same statement, while 85 respondents representing 24% disagreed with the statement and 52 respondents representing 14.4% strongly disagreed with the statement. Question fifteen (15) shows that 92 respondents representing 26% strongly agreed that A trainee can type and print out a hard copy on the computer system after the training., 210 respondents representing 58.3 agreed with the same statement. While 28 respondents representing 8% strongly disagreed with the same statement and 30 respondents representing 8.3% strongly disagreed with the same statement. Question sixteen (16) shows that 208 respondents representing 58% strongly agreed a trainee can identify different types of websites to use on the internet after the training, 130 respondents representing 36.1% agreed with the same statement. While 7 respondents representing 2% disagreed with the same statement and 15 respondents representing 4.1% strongly disagreed.

Findings: It has been seen from the research carried out that the effects of ICT resources usage in teaching and learning for entrepreneurial development in the institution is positive.

Recommendations

Based on the findings of this study, recommendations were given as follows:

a) The management of the of the institution concerned need to demonstrate readiness and give priorities to ICT by providing stable electricity and broad internet connectivity to ICT rooms in order to harmonise the situation hindering the positive effects of ICT training for entrepreneurial development.
b) The management of the institutions should recognize the impact and applicability of ICT resources to eliminate such challenges by providing capable manpower as well as entrepreneurial related software to the ICT unit for learning.
c) ICT units should ensure the functional level of its computer peripherals devices as well as the computer systems on and after training in order to effectively synergise the process of teaching and learning in the institution.

References

Akintunde, F. A., & Angulu, Y. D. (2015). The Use of Information and Communication Technology (ICT) in the Teaching and Learning of English Language in Nigeria: Journal of Literature, Languages and Linguistics www.iiste.org ISSN 2422-8435 An International Peer-reviewed Journal 15(15).

Bansa, Y. A. & Asrini, (2020). The Use of ICT in teaching: Lecturers' perceptions, obstacles, and expectation: The 1st International Conference on Education and Technology (ICETECH) 2019. Doi:10.1088/1742-6596/1464/1/012037

Bhattacharjee, B. & Deb, K. (2016). Role of ICT in 21st century's teacher education. International Journal of Education and Information Studies, 6(1), Pp.1-6.

Chen, A. N., McMurtrey, M,. McCalman, D., Castillo, J., and Ligon, K., (2015). Information and Communication Technologies (ICT): Components, Dimensions, and its Correlates: Journal of International Technology and Information Management 24(4).

Dabo, S. A., (2022). Role of ICT on Entrepreneurship Development in Jos and Environs, Plateau State, Nigeria: Dutse International Journal of Social and Economic Research 6(1).

De Dinechin, E., & Boutard, A., (2021). Information and Communication Technologies ICTs) and Inclusive Education. West Africa Desk social & inclusion technical division. RE l 15. Doi: https://doi.org/10.1016/j.compedu.2019.103725

Eremie, I., & Ugochukwu K. A., (2020). Information and communication technology (ICT) skills and efficient management of educational resources in public secondary schools: Journal of International Science and Technology Education (JISTE) 24(1). Ignatius Ajuru University of Education, Nigeria

Gil-Flores, J., Rodríguez-Santero, J., & Torres-Gordillo, J., (2017). Factors that explain the use of ICT in secondary-education classrooms: The role of teacher characteristics and school infrastructure: Journal of computer in human behaviour 68(2017). Pp 441 -449. Department of educational research methods and diagnostics, Educational sciences faculty, University of Seville, Pirotecnia, Spain.

Gomes, F., & Lopes, J., (2022). ICT Access and entrepreneurship in the open innovation dynamic context: Evidence from OECD Countries: Journal of Open Innovation: Technology, Market, and Complexity, 8(102).

Ine. (2014). Tecnologías de la informacion en la ense nanza no Universitaria: Principales resultados anuales, Serie 2002-2014. Information technology in non-University teaching: Primary annual results, Serie 2002-2014. Madrid:

Kuffu, G. Y., (2020). The role of ict tools in educational delivery: a study within the tamale metropolis. Department of African and General Studies, Faculty of Integrated development studies University for Development Studies

Limon, M. R. (2015). Home economics teachers' usage of information and communication technologies in Hong Kong and in the Philippines and its implications. International Journal of academic Research in progressive education and development, 4(4), Pp.21-30.

Mandoga, E., Matswetu, V., & Mhishi, M. (2013). Challenges and opportunities in harnessing computer technology for teaching and learning: A case of five schools in Makoni East District. International Journal of Humanities and Social Science, Viol.2, 105-112

Mohammed, U., Muhammad, M., & Nasiru, M. G., (2019). Effectiveness Of The Use of ICT Tools On Students Learning In Senior Secondary Schools In Sokoto South Local Government, Sokoto State, Nigeria: International Journal of Innovative Information Systems & Technology Research 7(3). Pp. 25-33,

Monira Sultana, M,. & Haque, S., (2018). The Cause of Low Implementation of ICT in Education Sector Considering Higher Education: A Study on Bangladesh: Journal of Canadian Social Science 14(12), ISSN 1923-6697.

Obidi, U. M., (2020). Issues in the use of ICT in business education in tertiary institutions in Anambra state: Nigerian Journal of Business Education (NIGJBED) 7(2). Dept. of tech. and voc. education, Nnamdi Azikiwe University, Awka.

Okomah, C. F., (2020). Application of Information Communications Technology (ICT) in Home Economics Education among Senior Secondary School Students in Azare, Katagum local government area, Bauchi State: African scholars Journal of Contemporary Education Research (JCER-8) 18(8).

Oye, N. D., Shallsuku, Z. K., & Lahad, N. A., (2012). The Role of ICT in education: Focus on University undergraduates taking mathematics as a Course: (IJACSA) International Journal of Advanced Computer Science and Applications 3(2).

Rapp A., (2019). Design fictions for learning: A method for supporting students in reflecting on technology in Human-Computer. Computers and education.

Saba, T. K., Shaharin, R., & Proshan, U. K., (2022). A Survey on ICT Education at the Secondary and Higher Secondary Levels in Bangladesh: I.J. Modern Education and Computer Science,22(1). Jatiya Kabi Kazi Nazrul Islam, University, Mymensingh, Bangladesh.

Santos. H., (2019). Digital transformation in higher education. Procedia computer science 164. Pp. 123–130.

Shehu, Y. I., Ibrahim, S., & Muhammad, A., (2023). An Investigation into the factors influencing the acceptance and use of ICT among the academic staff of Colleges of Education in Sokoto, Kebbi, and Zamfara States: Open Access Library Journal, 10: e9859 Department of Computer Science, Shehu Shagari College of Education, Sokoto, Nigeria

Saba, T. K., Shaharin, R., & Proshan, U. K., (2022). A Survey on ICT Education at the Secondary and Higher Secondary Levels in Bangladesh: I.J. Modern Education and Computer Science,22(1). Jatiya Kabi Kazi Nazrul Islam, University, Mymensingh, Bangladesh.

Shamim, M. R., H., & Abu Raihan, M. (2016). Effectiveness of using ICTs to promote teaching and learning in technical education: Case of Bangladesh: International Journal of Vocational and Technical Education, 8(2) Pp. 12–19.

Soma, A., Nantomah, I., and Adusei, R., (2021). The Challenges Facing the Integration of ICT in Ghanaian Educational System: A Systematic Review of Literature: International Journal of Humanities Social Sciences and Education (IJHSSE) 8(11)

Thakral, P., (2015). Role of ICT in professional development of teachers. Shree Satya B.Ed College, Karaiwala, Malout, Muktsar. Punjab, India.

Vanessa A. V. O., (2016). The ICT application for the education sector: a platform for the scholar curriculum. Editor. Nuevas ideas en informática educativa, Vol.12, Pp. 459 - 464. Santiago de Chile.

Undiyandeye, F. & Otu, E. A. (2015). Entrepreneurial skills acquisition and benefits amongst the undergraduate students in Nigeria. European Journal of Social Sciences, 5(1), Pp 9-14.

Zafar, S. M. T., (2019). Role of Information Communication Technology (ICT) in Education and its relative impact: International Journal of engineering research & technology (IJERT) ISSN: 2278-0181.