

The Role of ICT in Entrepreneurship Development: Study in Yobe State

Dr. Bukar Jamri

Department of Sociology,
Yobe State University, Damaturu
bukarjamri@gmail.com

Garba, Muktari

Department of Sociology,
Yobe State University, Damaturu
muktariGarba2014@gmail.com

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Abstract

The objective of this research is three-fold: to examine the role of ICT in entrepreneurship development in Yobe State; to identify the challenges faced by Yobe State entrepreneurs in ICT businesses; and to provide solutions to the challenges faced by Yobe State entrepreneurs in ICT businesses. The research adopted the Equilibrium Destruction Theory developed by Joseph Schumpeter (1949). Methodologically, the study adopted a survey research design and the target population of the study were male and female entrepreneurs, computer business owners, telecommunication shop owners, and other businessmen and women who use ICT to advertise products as well as customers who buy products online in Yobe State. The sample size was 150 respondents using a cluster sampling technique. Both primary and secondary data were sourced for this study. For the primary data, quantitative data were collected through the use of the questionnaire. The quantitative data were analyzed using descriptive statistics and presented in the form of frequency distribution and percentage. The study found that ICT plays multiple roles in entrepreneurship development in Yobe State because entrepreneurs know new businesses through development in ICT; promote existing businesses; perform businesses faster and easier through ICT and get in contact with international business people; and women and men carry out online business transactions remotely. The challenges faced by entrepreneurs in using ICT for their business activities include computer illiteracy among many entrepreneurs; lack of stable and strong internet services; high cost of data services; lack of trust from international business people; threats of hacking, advanced fee fraud among other cyber-attacks, lack of ICT know-how and lack of stable network, etc. The study recommended that: the Yobe State Government should collaborate with development partners to promote computer literacy among entrepreneurs in the State; provide stable and strong internet services at a cheaper rate; and entrepreneurs act with integrity to build trust to attract international business partners because insincerity among Nigerians is stagnating businesses in the country, etc.

Keywords: Development; Entrepreneurship; ICT; Yobe State

1.0 Introduction

The origin of communication is as old human race, but modern Information and Communication Technology (ICT) is relatively not old. It evolved with the advent of the information revolution in the 1970s when sophisticated electronic devices began to facilitate the communication process. Despite its novelty, modern ICT has become part and parcel of the modern world, in political, social, and economic terms. This is why the growth of entrepreneurship owed so much to the dramatic role of ICT. Although the historical origin of entrepreneurship is very long, arguably older than the ICT, entrepreneurship studies as a field of study followed the information revolution as it reached its peak in the 1980s (Jones & Wadhvani, 2006). Yet, entrepreneurial activities have indeed encompassed the concept of ICT itself because entrepreneurship is about innovation and creativity. Technology is the parent profession of all innovations.

From the historical point of view, Richard Cantillon (cited in NUC, 2015), was the first to introduce the concept of “entrepreneur” in his work in 1755. Cantillon viewed the entrepreneur as a risk-taker. This is similar to the contemporary usage of the term “entrepreneur” which transcends the mere investor of capital into a business, but also the inventors of the computer system and its soft and hard-wares, as well as the founders of the internet system. Their creativity has made them “entrepreneurs”. This is because they risked and invested a great deal of time, energy, and resources to come up with something for the world to benefit. Today, ICT is a cognate term for modernity by accelerating the speed of globalization and promoting economic and political activities. ICT itself is a means of innovation and creativity and it also makes many e-businesses more prospective, as people can buy and sell products, ideas, and services through the Internet. This trend is witnessed in Yobe State Nigeria because many youths make a living in the ICT and some have ventured into international businesses through modern ICT. Given this background, the present study investigates the role of ICT in entrepreneurship development in Yobe State.

1.1 Statement of the Research Problem

With the emergence of modern ICT, people are capable of communicating with one another from different parts of the world. As a result, the entire economic system has been drastically revolutionized, leading to new economic terms like e-banking, e-trading e-commerce, and e-governance among others. This innovation has invariably culminated in the transformation of entrepreneurship because people can use modern ICT to prepare and process products, advertise the products, and transport them without much delay and difficulties. In other words, ICT has promoted the development of entrepreneurship. This trend is witnessed in Yobe State because many youths make a living in ICT through telecommunication businesses and Foreign Exchange (FOREX).

The vast majority of ICT-facilitated entrepreneurship in Yobe State is, however, in the agri-premiership poultry farming and other animal husbandry, advertising and selling of garments, jewellery, embroidery, and different tailoring designs, Paint of Paris (PoP), paintwork, etc. Across Yobe State and the neighbouring country of Niger Republic, the Yobe State youths are now into international businesses through the modern ICT. Despite the increasing involvement of the Yobe State youths in ICT today, there are some lingering challenges associated with online businesses and entrepreneurial activities. Some of the challenges faced by entrepreneurs in using ICT for their

business activities include hacking, advanced fee fraud among other cyber-attacks, lack of ICT know-how, and lack of stable network (Haq, 2010; Ibrahim & Mukhtar, 2017; Saleh, Abdullahi & Mukhtar, 2017).

The study will find answers to the following research questions:

1. What is the role of ICT in entrepreneurship development in Yobe State?
2. What are the challenges faced by Yobe State entrepreneurs in ICT businesses?
3. What are the solutions to the challenges faced by Yobe State entrepreneurs in ICT businesses?

1.2 Objective (s) of the study

1. To examine the role of ICT in entrepreneurship development in Yobe State;
2. To identify the challenges faced by Yobe State entrepreneurs in ICT businesses; and
3. To provide solutions to the challenges faced by Yobe State entrepreneurs in ICT businesses.

2.0 Literature Review

This section deals with the review of some works that have been done on the key terms (ICT, entrepreneurship development), the role of ICT in entrepreneurship development, and the challenges faced by Yobe State entrepreneurs in ICT businesses.

2.1 Conceptual Clarifications

Entrepreneurship: Entrepreneurship is defined variously, depending on the context. Batra (2012) defined entrepreneurship in three different ways: 1) finding new products or combinations to satisfy needs (to innovate); 2) organizing resources effectively (to create organizations); and 3) creating wealth by adding value to generate employment. Ibrahim (2017), on the other hand, defined entrepreneurship as an activity that involves the ability to risk and utilize one's available capital, labour or energy, and resources for investment, merchandise, and creating new things of value that could benefit the risk bearer (entrepreneur) and the entire society.

Beyond the traditional economic literature that focused on risk-taking, the foregoing definition implies that entrepreneurship is not limited to risk-taking in business activities; instead, it involves the skilful and proper management of the other factors of production as recognized by classical economic literature. Thus, Batra (2012) mentioned that classical economics recognizes three factors in production, namely, raw materials, labour, and capital. On top of these three factors, entrepreneurship represents the fourth factor which organizes the first three. Entrepreneurs are the persons who use innovative methods to restructure a value chain to reap entrepreneurial profit.

Information and Communication Technology (ICT): Like entrepreneurship, ICT is defined variously. Olaore (2014) defined ICT as computer-based tools and techniques for gathering and using information, encompassing hardware and software, networks, and several other devices, like video, audio, and photographic cameras, among others. More precisely, Haq (2010) defined ICT as the use of digital technologies that facilitate the processing and communication of information. Haq's examples of ICT include technologies that range from personal computers to PDAs (personal digital assistants), from mobile phones to satellite phones, and from fax machines to robots. ICT, in this context, could be seen as those technologies used electronically (wireless, as well) to access information and/or exchange information for a variety of purposes (educational purposes in this case).

ICT offers powerful tools that can help an entrepreneur make a successful breakthrough in his/her respective area of business. Entrepreneurs can develop and marketize his/her products or services in all learning areas through the use of ICT in an appealing outlook. It is also important that entrepreneurs know how to use ICT efficiently and responsibly, communicate proficiently, as well as learn how to protect their information and other products and secure their data.

2.2 ICT and Entrepreneurship Development in Nigeria

There is mutual reinforcement between ICT and entrepreneurship; that is, ICT makes entrepreneurship thrive as much as entrepreneurship led to the emergence of ICT. In other words, ICT itself is a means of innovation and creativity and it also makes many e-businesses more prospective, as people can buy and sell products, ideas, and services through the Internet. As Schumpeter (1942, as cited in Ahmed & McQuaid, 2005) argued, entrepreneurship leads to the implementation of new combinations of means of production through introducing new products and methods of production; opening new markets; gaining new sources of inputs; or changing the structure of an organization or an industry.

ICT has many roles as per as entrepreneurship development is concerned. As evident in many technologically advanced countries, ICT can help many developing countries, Nigeria inclusive, to combat several socio-economic challenges confronting them. More access to crucial and relevant information with the use of the internet infrastructure, as well as the creation of several innovative tools and accessories, are enablers of multiple opportunities for entrepreneurs to creatively make use of. It is generally believed that the traditional mass media- radio, television, and print media- are playing fundamental roles in the dissemination of information especially in developing economies like Nigeria (Jamri, 2023).

In recent years modern ICT, such as mobile phones and the internet (and associated applications such as VOIP, transmitting telephone calls over the internet) have become available to growing numbers worldwide. The most rapid growth is in mobile phone usage. Total (fixed and mobile) telephone access in developing countries increased from 2% in 1991 to 31% in 2004. Internet usage has also grown rapidly: from 0.03% of developing country inhabitants in 1994 to 6.7% in 2004. The latest statistics however have shot up to over 10% on average (Anson, Emmanuel & Hayfron-Acqua, 2012).

From the foregoing, it could be said that it is through entrepreneurship that people can come up with the discovery of the internet, which has now made the world so globalized. With the wireless communication system, led to the emergence of new businesses, interaction has become easier, economic relationships have become so sophisticated and national markets turned out to be internationalized. The foregoing also reveals that people can combine their business skills with ICT skills to marketize products, make them more saleable and easier to sell and deliver within the shortest possible time. This is not limited to selling computer accessories, but also the marketing of shoes, clothes, jewellery, building materials, agricultural raw and processed items as well as selling of knowledge (Jamri, 2023).

According to Jamri (2023), ICT can be a source of employment for many unemployed youths; it can promote existing businesses and generate income for communities and the government through internally generated revenue (IGR). In many developed and developing countries, it has been reported that ICT as a sector can contribute immensely to the national GDP of a nation and that ICT, acting as an enabler, can result in improved market competitiveness of a nation's products and services (Kundishora, 2008). Consequently, ICT in entrepreneurship is an engine of national progress in Nigeria as it can stimulate technological advancement and make the economy of the country robust by generating more IGR, creating employment opportunities for the youths, and fighting poverty.

2.3 Theoretical Framework

To explain the role of ICT in entrepreneurship development in Yobe State, the research will adopt the Equilibrium Destruction Theory. The theory was developed by Joseph Schumpeter (1949). The basic assumption of the Equilibrium Destruction Theory is that the entrepreneur is an agent of discovery, who radicalized the economic system with remarkable innovations. Schumpeter looks at entrepreneurship as innovation and not imitation. Schumpeter's innovator as an economic and social leader does not care much about economic profits and only the joy he gets from being an innovator and being a server to his society. Schumpeter's entrepreneur is an innovator in the entrepreneurship arena. In the Schumpeterian theory, the entrepreneur moves the economy out of the static equilibrium (Bula, 2012).

The entrepreneur is not (necessarily) the one who invents new combinations but the one who identifies how these new combinations can be applied in production. This line of reasoning implies that a business owner is considered an entrepreneur only if he is carrying out new combinations. The entrepreneur moves the economic system out of the static equilibrium by creating new products or production methods thereby rendering others obsolete. This is the process of creative destruction (creating uncertainty) which Schumpeter saw as the driving force behind economic development (Schumpeter, 1949).

Ahmed & McQuaid (2005) suggest a staged process starting with innovative entrepreneurial behaviour in the firms that create the catalytic Schumpeterian event (such as a new technological development). This is followed by the entrepreneurial activities of identifying resulting opportunities, deciding on actions, and allocating resources to take advantage of them (for example improving competitiveness through adopting new products or process innovations). Later, the opportunities presented by the innovations are reduced or are exhausted, and firms focus on improving efficiency and price competition, perhaps through 'routine' entrepreneurship and move towards market equilibrium (Ahmed & McQuaid, 2005: 11). At each stage there would be the need for different policies, with perhaps support for innovative start-up or more general firms or commercializing basic research and supportive 'entrepreneurial culture' in the first stage. In the second phase, the role of policies may be to ensure universal access to the technological or other 'hard' or 'soft' infrastructure or to help create markets and other micro-level policies. In the final stage, the role may be to ensure a stable macroeconomic environment and effective market

operation. In each stage, the types of policies overlap, but there needs to be integration between policies and policy actors, and a long-term perspective (Ahmed & McQuaid, 2005).

The Schumpeterian theory is relevant to the present study because ICT is a new trend in the history of Nigeria in general, starting less than three decades ago) and only those entrepreneurs who dared to embrace it in production, marketing, and distribution can prove to be destroyers of static equilibrium. Using this theory, therefore, ICT in entrepreneurship the entrepreneurs can revolutionize their enterprises and the prospective entrepreneurs can develop the potential of outdoing those entrepreneurs who refused to implore the ICT tools or reject the ICT-related businesses. More importantly, the ICT entrepreneurs have contributed to the economic development of Nigeria by offering job opportunities to many youths, generating revenue and creating new avenues for national social and economic progress (Jamri, 2023).

However, the theory has some limitations in the context of this work. Firstly, Schumpeter assumes entrepreneurship as a monolithic concept by recognizing an entrepreneur as an innovator rather than an imitator. In the conceptual clarification, it was made clear that “entrepreneur” can mean more than a thing. This definitional flexibility will allow for the varieties of people in the entrepreneurial circle to find one place or the other in the classification-hence the entrepreneur can be seen as an innovator or imitator, Fabian or drone. Secondly, by encouraging the entrepreneurs in Nigeria to make use of ICT in their business promotion, and the prospective entrepreneurs to join the ICT-related activities in the business environment, it implies that the entrepreneurs in Nigeria shall imitate the business pattern of other developed societies of the West and Asia; who developed economically through the modern marketing system.

3.0 Description of the Study Area and Methodology

This section deals with the description of the study area and methodology. It consists of methods and tools for data collection, research design, study population, sample size, sampling techniques, method of data collection, and method of data analysis.

3.1 Description of the Study Area

Yobe State, Nigeria is the study location. Based on the national head count, the population of Yobe State stood at 2.5 million (Census, 2006). The State is strategically located in the far northeastern part of Nigeria carved out of the old Borno State on 27th August 1991 by the then Military administration of General Ibrahim Badamasi Babangida. The state shares international boundary with the Republic of Niger to the North (YBS Gazette, 2013). Within the country, it shares borders with Jigawa and Bauchi States to the West, Borno State to the East as well as Gombe and Borno to the South.

Most of the people are peasant farmers which is the main reason why guinea corn, ground nuts, beans; maize, millet, wheat, and rice are produced in commercial quantities. A significant number of the inhabitants also engaged in trading, fishing, livestock and animal rearing. The state has the largest cattle market located at Potiskum town which makes it the supplier of livestock in the country. Traditionally, the people are known for the world-famous durbar usually organized on important occasions like turbanning ceremonies of traditional rulers as well as honouring august visitors (Fartua, & Palmer, 1970). It is important to point out that, nature has endowed Yobe State with diverse economic potentials such as Diatomite, Limestone, Kaolin, Quartz, Gypsum, Gum-

Arabic, and Potash. The capital of the Yobe State is positioned at Damaturu. The name Yobe was derived from River Yobe an important geographical feature in the state. It has seventeen (17) Local Government Areas which all together cover an estimated area of 47,153 square kilometres.

In the area of education, Yobe State remained one of the educationally less developed in the federation (UNESCO, 2013). Specifically, girls' enrolment net stood at 15%. This indicates a wide gender gap in terms of school enrolment between boys and girls. The trend is also reflected in the higher institutions of learning. However, the emergence of modern ICT has reduced pressure on schools because there are new Federal Government ICT centres built in Gashua and LGAs which are meant to train youths to become self-reliant and entrepreneurs. However, Asiyai (2013) argued that integrating ICT into educational practices is needed to improve teaching and learning, enhance educational research, enhance collaboration among peers, and improve the quality of education in Nigeria, Yobe State inclusive.

3.2 Research Design

A survey research design is adopted. Therefore, the opinion of the public was collected on the role of ICT in entrepreneurship development in Yobe State. The challenges faced by the entrepreneurs in utilizing ICT and solutions to these challenges would also be generated from the public. Both primary and secondary data were used. For the primary data, quantitative data was collected through a questionnaire. The data was analyzed using the quantitative method of data analysis; descriptive statistics and simple percentages.

3.3 Population of the Study

The target population of the study includes male and female entrepreneurs, computer business owners, telecommunication shop owners and other businessmen and women who use ICT to advertise products as well as customers who buy products online in Yobe State.

3.4 Sample Size and Sampling Technique

The sample size of the study was 150 respondents. The entire respondents were used for quantitative data. To select the samples, a cluster sampling technique was adopted to divide the study area (Yobe State) into three based on the senatorial districts (Zone A, Zone B, and Zone C). This means that each senatorial district has 150 respondents ($50 \times 3 = 150$). In the next stage, a purposive sampling technique was then adopted to purposely select one LGA from each of the three clusters. Thirdly, a convenient sampling technique was adopted to collect data from any of the proposed target populations (i.e. male and female entrepreneurs, computer business owners, telecommunication shop owners, and other businessmen and women that use ICT to advertise products as well as customers that buy products online in Yobe State).

3.5 Sources of Data

Both primary and secondary data were sourced. For the primary data, quantitative data was collected through a questionnaire. The secondary data sources were textbooks, internet materials, journal articles, newspapers, conference proceedings, and seminar presentations.

3.6 Instrument and Method of Data Collection

The instrument of data collection was the questionnaire guide. The questionnaire was designed to pose questions that can address the objectives of the study: the role of ICT in entrepreneurship development, the challenges, and solutions to the challenges faced by the entrepreneurs. In addition, secondary data are to be used throughout the study, especially in literature review and review of relevant literature.

3.7 Techniques of Data Analysis

The data was analyzed using the quantitative method. The quantitative data was analyzed through frequency distribution and simple percentages in descriptive statistics.

4.0 Results and Discussions

The instrument of data collection employed was a questionnaire. The data collected using questionnaire guides were presented in tabular form and interpreted first. A total of 150 questionnaires were administered to the respondents but only 146 questionnaires were retrieved. Thus, the analysis is based on the 146 questionnaires.

4.1 Section A: Personal, Socio-Economic, and Demographic Data of the Respondents

This section deals with the personal, socio-economic, and demographic information of the respondents.

Table 1.1: Personal, Socio-Economic, and Demographic Data of the Respondents

S/N	Variables	Options	Frequency	Percentage
1.	Gender	Male	94	64.4
		Female	52	35.6
		Total	146	100
2.	Age	18-27	37	25.3
		28-37	31	21.2
		38-47	43	29.5
		48-57	27	18.5
		58 and above	08	5.5
		Total	146	100
3.	Marital Status	Single	59	40.4
		Married	83	56.8
		Divorced	01	0.7
		Widowed	03	2.1
		Total	146	100
5.	Educational Qualification	No formal education	08	5.5
		Quranic education	06	4.1
		Primary education	14	9.6
		Secondary education	29	19.9
		OND/NCE	27	18.5
		First Degree/HND	51	34.9
		Postgraduate	11	7.5
		Total	146	100
8.	Occupation	Civil Servant	28	19.2
		Student (western education)	24	16.4
		Student (Quranic education)	07	4.8

		Traders	74	50.7
		Others	13	8.9
		Total	146	100
9	Monthly Income	No income	02	1.4
		N10,000-N29,999	15	10.3
		N30,000 – N49,999	24	16.4
		N50,000 –N69,999	28	19.2
		N70,000-N89,999	30	20.5
		N90,000-and above	47	32.2
		Total	146	100

Source: Field Survey, 2024

Table 1.1 above shows data on the personal, socio-economic, and demographic information of the respondents. The Table shows that there are more male respondents, represented by 64.4 percent than females, who constitute 35.6 percent of the total sample. In the age category of the respondents, those who fall within the age bracket of 38-47 years constitute the majority (29.5%), while those from 58 years and above were the minority (5.5%). In the marital status variable, respondents who were married were the majority (56.8%), while those divorced were the minority (0.7%). In the educational qualification of the respondents, respondents with a first degree and Higher National Diploma (HND) constitute the majority (34.9%) and those with no formal education were the minority (5.5%) in the total sample. The occupational distribution of the respondents showed that traders constituted the majority (50.7%), followed by civil servants (19.2%), while students in Quranic education were the minority (4.8%) in the total sample. Finally, the table shows that respondents earning the highest level of income (N90,000 and above) in the distribution were the majority, represented by 32.2 per cent, and those without any income were the minority, represented by 1.4 per cent.

4.2 Section B: The Role of ICT in Entrepreneurship Development in Yobe State

This section presents a detailed analysis of the role of ICT in entrepreneurship development in Yobe State. A series of questions were used to elicit responses, which are presented as frequency scores with percentages. The remarks indicate a general acceptance of the statements based on the responses.

Table 1.2: The Role of ICT in Entrepreneurship Development in Yobe State

S/N	Questions	Options	Frequency	Percentage
10	Whether respondent is aware of the role of ICT in entrepreneurship development	Yes	137	93.8
		No	8	5.5
		No response	1	0.7
		Total	146	100
11	The role of ICT in entrepreneurship development in Yobe State	Response	Yes	No
		Entrepreneurs know new businesses through modern ICT	131(%91.0)	15 (%9.0)

		Entrepreneurs learn how to promote existing businesses	137(%87.3)	9 (%12.7)
		Entrepreneurs perform businesses faster and easier through ICT	121(%67.7)	25 (%32.3)
		Yobe entrepreneurs get in contact with international business people	17 (%11.6)	129(%88.4)
		Others	58 (39.7%)	88 (60.3%)
12	Whether Schools in Yobe State teach students business ideas through ICT	Strongly agreed	59	40.4
		Agreed	44	30.1
		Disagreed	21	14.4
		Strongly disagreed	13	8.9
		Undecided	9	6.2
		Total	146	100
13	Whether ICT itself is a business domain for entrepreneurs	Strongly agreed	68	46.6
		Agreed	59	40.4
		Disagreed	9	6.2
		Strongly disagreed	4	2.7
		Undecided	6	4.1
		Total	146	100

Source: Field Survey, 2024

Table 1.2 above shows data on the role of ICT in entrepreneurship development in Yobe State. The table shows that the majority of the respondents (93.8%) are aware of the role of ICT in entrepreneurship development. Also, the majority of the respondents (91.0%) reported that ICT plays a role in entrepreneurship development in Yobe State because entrepreneurs know new businesses through modern ICT. Those who reported that ICT plays a role in entrepreneurship development in Yobe State because entrepreneurs learn how to promote existing businesses, constitute 87.3 per cent. Those who reported that ICT plays a role in entrepreneurship development in Yobe State because entrepreneurs perform businesses faster and easier through ICT, constitute 67.7 per cent. However, the majority of the respondents (88.4%) did not believe that ICT plays a role in entrepreneurship development in Yobe State through entrepreneurs getting contact with international business people.

Also, 39.7 per cent of the sampled respondents reported other roles played by the ICT in entrepreneurship development in Yobe State, such as cryptocurrency or blockchain businesses and other online businesses run by women and girls in the comfort of their rooms, etc. This is why Kundishora (2008) reported that ICT is a sector that contributes to the national GDP of many nations and results in improved market competitiveness of a nation's products and services.

When asked whether Schools in Yobe State teach students business ideas through ICT, the majority of the respondents (40.4%) reported that they strongly agreed; 30 per cent agreed, while the minority (6.2%) were indecisive about their response. When asked whether ICT itself is a

business domain for entrepreneurs, the majority of the respondents (46.6%) strongly agreed; 40.4 per cent agreed, while the minority (2.7%) strongly disagreed. This is in line with the finding of Jamri (2023), who stated that entrepreneurial activities have indeed encompassed the concept of ICT itself because entrepreneurship is about innovation and creativity. Technology is the parent profession of all innovations.

4.3 Section C: The Challenges Faced by Yobe State Entrepreneurs in Using ICT for Businesses

This section presents and interprets data on the challenges faced by Yobe State entrepreneurs in using ICT for businesses.

Table 1.3: The Challenges Faced by Yobe State Entrepreneurs in Using ICT for Businesses

S/N	Questions	Options	Frequency	Percentage
14	Whether there are challenges faced by entrepreneurs in ICT businesses	Yes	136	93.1
		No	9	6.2
		No response	1	0.7
		Total	146	100
15	The challenges faced by Yobe State entrepreneurs in ICT businesses	Response	Yes	No
		Most of them are not computer-literate	109(74.7%)	37 (25.3%)
		Lack of stable and strong internet services	103(70.5%)	43 (29.5%)
		High cost of data services	94(64.4%)	52 (35.6%)
		Lack of trust from international business people	129(88.4%)	17 (11.6%)
		Others, specify	18 (12.3%)	128 (87.7%)
16	Whether the lack of ICT-related workshops for local entrepreneurs is a challenge faced by Yobe State entrepreneurs in ICT businesses	Strongly agreed	105	71.9
		Agreed	31	21.2
		Disagreed	6	4.1
		Strongly disagreed	3	2.1
		Undecided	1	0.7
		Total	146	100

Source: Field Survey, 2024

Table 1.3 above shows data on the challenges faced by Yobe State entrepreneurs in using ICT for businesses. The Table shows that the majority of the respondents (93.1%) believed that there are challenges faced by entrepreneurs in ICT businesses. The challenges faced by Yobe State entrepreneurs in ICT businesses, based on the respondents' opinions, are most of the entrepreneurs are not computer literate (74.7%); lack stable and strong internet services (70.5%); high cost of data services (64.4%); and lack of trust from international business people (88.4%). Few of the respondents (12.3%), reported other challenges, such as the lack of willingness of the Yobe State entrepreneurs to learn about online businesses and make international connections, etc. In discordance with the above finding, Ibrahim & Mukhtar (2017) stated that the challenges faced by entrepreneurs in using ICT for their business activities include hacking, advanced fee fraud among other cyber-attacks, lack of ICT know-how, and lack of stable network.

When asked whether the lack of ICT-related workshops for local entrepreneurs is a challenge faced by Yobe State entrepreneurs in ICT businesses, the majority of the respondents (71.9%) strongly agreed, 21.2 per cent agreed, 2.1 per cent strongly disagreed and the minority (0.7%) were undecided.

4.4 Section D: Solutions to the Challenges faced by Yobe State Entrepreneurs in Using ICT for Businesses

This section deals with solutions to the challenges faced by Yobe State entrepreneurs in Using ICT for businesses.

Table 1.4: Solutions to the Challenges faced by Yobe State Entrepreneurs in Using ICT

S/N	Questions	Options	Frequency	Percentage
18	Whether there are solutions to the challenges faced by entrepreneurs in using ICT for businesses	Yes	129	88.4
		No	16	10.9
		No response	1	0.7
		Total	146	100
19	Solutions to the challenges faced by Yobe State entrepreneurs in using ICT for businesses	Response	Yes	No
		Promoting computer literacy amongst entrepreneurs	121(%67.7)	25 (%32.3)
		Providing stable and strong internet services	137(%87.3)	9 (%12.7)
		Reducing the cost of data services	129(%34.1)	17 (%65.9)
		Building trust from international business people	109(74.7%)	37 (25.3%)
		Others	15 (%9.0)	131(%91.0)
20	Whether ICT-related training workshops by the Yobe State government for local entrepreneurs will be a solution to the challenges faced by Yobe State entrepreneurs	Strongly agreed	94	64.4
		Agreed	37	25.3
		Disagreed	7	4.8
		Strongly disagreed	6	4.1
		Undecided	2	1.7
		Total	146	100

Source: Field Survey, 2024

Table 1.4 above shows data on the possible solutions to the challenges faced by Yobe State entrepreneurs in using ICT for businesses. The Table shows that the majority of the respondents (88.4%) believed that there are solutions to the challenges faced by entrepreneurs in using ICT for businesses. As reported by the respondents, the possible solutions to the challenges faced by Yobe State entrepreneurs in using ICT for businesses are: promoting computer literacy amongst entrepreneurs (67.7%); providing stable and strong internet services (87.3%); building trust from international business people (74.7%); while the majority of the respondents (65.9%) did not believe that reducing the cost of data services is a solution to the challenges faced by entrepreneurs in using ICT for businesses. When asked whether ICT-related training workshops by the Yobe

State government for local entrepreneurs will be a solution to the challenges faced by Yobe State entrepreneurs, the majority of the respondents (64.4%) strongly agreed, 25.3 per cent agreed, and 1.7 per cent of them were undecided.

When asked about the role of the Yobe State entrepreneurs in solving the challenges they face in using ICT for businesses, a businessman in Nguru LGA stated that:

We have never received any training from the Government. We learn it the hard way through the daily use of Android smartphones and so on. But there were some instances in which the Zone Senator came up with programmes that targeted youths to learn businesses through computer centres, phone repairs, barbing and carpentering, but it is not for entrepreneurs.

But Jamri's (2023) finding showed that the government is providing support in the aspect of ICT. Nigeria has benefitted from ICT in economic growth because the Ministry of Communication, under the leadership of Isa Ali Pantami has generated revenue that other economic sectors could not.

5.0 Conclusion

The study investigated the role of ICT in entrepreneurship development in Yobe State, Nigeria. Noting that the world is nowadays dominated by the Internet of Things, trade and commerce should be one of the critical sectors to benefit from modern ICT. That is why the research examined how ICT plays a role in entrepreneurship development in the study area. In conclusion, ICT plays multiple roles in entrepreneurship development in Yobe State because entrepreneurs know new businesses through modern ICT. They learn how to promote existing businesses; they perform businesses faster and easier through ICT and they get contact with international business people. Another role of ICT in entrepreneurship development in Yobe State is online businesses run by women and girls in the comfort of their rooms ICT itself is a business domain for entrepreneurs.

However, there are challenges faced by entrepreneurs in using ICT for their business activities which include computer illiteracy among most of the entrepreneurs; lack of stable and strong internet services; high cost of data services; lack of trust from international business people; willingness of the Yobe State entrepreneurs to learn about online businesses and make international connections; threats of hacking, advanced fee fraud among other cyber-attacks, lack of ICT know-how and lack of stable network, etc. This is why the next section will suggest some measures for addressing these challenges and allow entrepreneurs to make optimum use of ICT for their businesses in Yobe State and Nigeria in general.

5.1 Recommendations

Based on the findings of the study, the following recommendations are made:

1. The Yobe State Government should collaborate with development partners to promote computer literacy among entrepreneurs in the State.
2. Providing stable and strong internet services at a cheaper rate will go a long way in utilizing modern ICT for entrepreneurship in Yobe State.

3. There is also the need for entrepreneurs to act with integrity to build trust from international business people because insincerity among Nigerians is stagnating businesses in the country.
4. Just like the National Communication Commission (NCC) gives training to civil and public servants on modern ICT, there is the need for ICT-related training workshops by Yobe State Government for local entrepreneurs.
5. Strong cyber security measures will encourage Yobe State entrepreneurs to embrace modern ICT in their businesses because fear of cybercrime victimization is discouraging many of them enter into online business.

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APPENDIX I
DEPARTMENT OF SOCIOLOGY
YOBE STATE UNIVERSITY
QUESTIONNAIRE GUIDE

Respondent's Consent

Dear Sir/Ma,

I am an academic staff in the above-named Department and institution. I am researching the topic: **The Role of ICT in Entrepreneurship Development: Study in Yobe State**. To gather the opinion of the general public on the subject matter within Yobe State, I am soliciting your cooperation to kindly fill out this questionnaire. Your participation in answering the set of questions is voluntary. I assure you that the information given will strictly be used for academic purposes, adhering to all the principles guiding research ethics.

Thank you for your cooperation.

Dr. Bukar Jamri

Instruction: Kindly indicate your answers by ticking on the option(s)

Section A: Personal, Socio-Economic, and Demographic Data of the Respondents

1. Gender

1. Male ()

2. Female ()

2. Age

1. Below 18 years ()

2. 18 – 27 years ()

3. 28 – 37 years ()

4. 38- 47 years ()

5. 48-57 years ()

6. 58 and above ()

3. Marital Status

1. Single ()

2. Married ()

3. Divorced ()

4. Widow ()

4. Education

1. Primary ()

2. Secondary ()

3. Tertiary ()

4. Qur’anic Education ()

5. Others ()

5. Occupation

1. Civil Servant ()

2. Student (western education) ()

3. Student (Quranic education) ()

4. Traders ()

5. Others..... ()

6. Monthly Income

1. N10,000-N29,999 ()

2. N30,000-N49,999 ()

3. N50,000- N69,999 ()

4. N70,000- N89,999 ()

5. N90,000 and above ()

Section B: The Role of ICT in Entrepreneurship Development in Yobe State

7. Are you aware of the role of ICT in entrepreneurship development?

1. Yes ()

2. No ()

If no, skip Question 8-10

8. If Q7 is yes, what is the role of ICT in entrepreneurship development in Yobe State?

S/N	Role of ICT in Entrepreneurship Development	Yes	No
1.	Entrepreneurs know new businesses through modern ICT		
2.	Entrepreneurs learn how to promote existing businesses		
3.	Entrepreneurs perform businesses faster and easier through ICT		
4.	Yobe entrepreneurs get in contact with international business people		
5.	Others specify		

9. Schools in Yobe State teach students business ideas through ICT

1. Strongly agree ()

- 2. Agree ()
- 3. Undecided ()
- 4. Disagree ()
- 5. Strongly disagreed ()

10. ICT itself is a business domain for entrepreneurs

- 1. Strongly agree ()
- 2. Agree ()
- 3. Undecided ()
- 4. Disagree ()
- 5. Strongly disagreed ()

Section C: The Challenges Faced by Yobe State Entrepreneurs in Using ICT for Businesses

11. Are there challenges faced by entrepreneurs in ICT businesses?

- 1. Yes ()
- 2. No ()
- 3. If no, skip Questions 12-13

12. If Q11 is yes, what are the challenges faced by Yobe State entrepreneurs in ICT businesses?

S/N	Challenges faced by Entrepreneurs in Using ICT	Yes	No
1.	Most of them are not computer-literate		
2.	Lack of stable and strong internet services		
3.	High cost of data services		
4.	Lack of trust from international business people		
5.	Others, specify		

13. Lack of ICT-related training workshops by the Yobe State government for local entrepreneurs is a challenge faced by Yobe State entrepreneurs in ICT businesses

- 1. Strongly agree ()
- 2. Agree ()
- 3. Undecided ()
- 4. Disagree ()
- 5. Strongly disagreed ()

Section D: Solutions to the Challenges faced by Yobe State entrepreneurs in Using ICT for Businesses

14. Do you think there are solutions to the challenges faced by entrepreneurs in using ICT for businesses?

- 1. Yes ()

2. No
 If no, skip Question 15-17

15. If Q14 is yes, what are the solutions to the challenges faced by Yobe State entrepreneurs in using ICT for businesses?

S/N	Solutions to the Challenges faced by Entrepreneurs	Yes	No
1.	Promoting computer literacy amongst entrepreneurs		
2.	Providing stable and strong internet services		
3.	Reducing the cost of data services		
4.	Building trust from international business people		
5.	Others		

16. ICT-related training workshops by the Yobe State government for local entrepreneurs will be a solution to the challenges faced by Yobe State entrepreneurs.

1. Strongly agree
 2. Agree
 3. Undecided
 4. Disagree
 5. Strongly disagreed

17. What is the role of NGOs in solving the challenges faced by Yobe State entrepreneurs in using ICT for businesses?.....

18. What is the role of the Yobe State entrepreneurs in solving the challenges they face in using ICT for businesses?.....