# Managing Basic Education for Job Creation Through Emerging Technologies and Innovation in Nigeria

#### Nimota Jibola Kadir Abdullahi

Department of Educational Management Faculty of Education University of Ilorin E-mail id: abdullahi.njk@unilorin.edu.ng

## Abstract

Job creation in developing countries depends largely on the effective management of basic education. The main objective of this study was to investigate the influence of effective management of basic education on job creation through emerging technologies. The participants were selected from the sampled public primary schools and junior secondary schools in Northwest, Nigeria using stratified random sampling technique to select 712 school heads (377 head teachers & 335 principals) and 765 teachers. Pearson product moment correlation coefficient and linear regression analysis were used to test the hypotheses. The findings revealed that computer technician, phone repairing and web designing significantly contributed much to job creation. Therefore, it was recommended that school managers should focus more on computer technician skills development in basic education so as to help learners to be self-reliant and self- developed. Also, school managers should continue to encourage effective phone repairing training in basic education so as to inspire learners to establish new ways of innovative skill in running a business. Furthermore, web designing skill should be sustained in basic education in line with emerging technology for the purpose of meeting the needs of learners in terms of helping learner to develop skill in designing websites and blogs creation, developing skill in programming and database thereby empowering learner to be self-employed ad self-reliant in their respective careers.

**Keyword:** computer technician skill; phone repairing skill, web designing; job creation; emerging technologies.

## 1. Introduction

The importance of education to human beings cannot be overemphasized because it is seen as a human right which everyone must be given the opportunity to enjoy. The Universal Basic education (UBE) is a nine years basic education programme which aimed at creating a solid foundation for life-long education by ensuring acquisition of appropriate levels of literacy, numeracy, manipulative, vocational, communication and life skills. The real challenge for basic education management is that of creating the acquisition of innovative skills and application of the knowledge of technology that leads to particular job creation.

In Nigeria, various types of vocational skills such as tailoring, bead making, interior decoration, hair dressing, shoe making, photography, furniture, web designing, make-up, computer technician, barbering, phone repairing and catering are commonly acquired through the non-formal and formal educational system. The non-formal education is undertaken by a master craft man who trained the apprentice in prescribed workshop. The formal education system was being done in government technical colleges. Therefore, due to the introduction of 9-3-4 system of education which was characterized as a system with fixed curriculum with standard pedagogical methods for skill acquisition from primary education to junior secondary school (basic education). Thus, it is pertinent to introduce the learners to the world of technology in order to arouse their interest toward choice of a vocation so as to acquire technical skill before the end of junior secondary schools.

In the age of information and communication technology, the overall development of any nation is connected with the quantity and quality vocational skills possessed by nation's workforces. The philosophy of nine years of basic education is centered on the fact that every learner should acquire appropriate level of skills required for laying good foundation for life-long learning as a basis for scientific and reflective thinking. The planning of UBE in the country has not been given adequate attention to relevance, quality and functionality of education due to the fact that, there are learners that have graduated from junior secondary school and are not yet self-reliant and cannot do anything for themselves (Mbaneto, 2015). Also, the efforts to empower learners in Nigeria have not been achieved significantly because unemployment rate still remain high. Thus, this prompted the researcher to carry out managing basic education for job creation through emerging technologies and innovations in Nigeria.

The issue of unemployment has become a bottleneck which affect the standard of living of many citizens in Nigeria. This issue has led to insecurity such as Boko Haram. Bandits, kidnapping, cattle rustling, gender-based and sexual violence (GBSV) and other related human right abuses in the country. Numerous studies have been conducted on managing education and job creation. Mbanefo and Eboka(2019) studied entrepreneurial skill and job creation in secondary school in Nigeria. Sample of 441 principals and 4340 basic science teachers were selected. The finding showed that a lot of skills were needed for job creation. Abdullahi et al (2017) embarked on phone repairs in business education and sustainable development goal. Oladotun (2020) investigated adult literacy skill acquisition and women empowerment in Gambia. The study made use of descriptive design with 250 respondents. The findings revealed that skill acquisition correlate significantly with women empowerment. Isaboke (2019) treatise has a focus on vocational education training and youth empowerment in Rwanda. However, none of the authors quoted in this study focused on managing basic education vocational training as a critical measure of creating job among learners. Also, the past studies could not actually explain the relationship that exist between computer technician, phone repairing, web designing and job creation through emerging technologies in Nigeria. Another obvious gap that warranted this study is that the locale or areas of study of the aforementioned extant studies differ considerably from the studies. Therefore, this study endeavour to fill the gaps left by the previous scholars. The following objectives have been formulated to guide the conduct of the present study:

- a) Examine the relationship between computer technician skill and job creation in Nigeria
- b) Examine the relationship between phone repairing skill and job creation in Nigeria.
- c) Examine the relationship between web designing skill and job creation in Nigeria.
- d) Examine the relationship among computer technician, phone repairing, web designing and job creation in Nigeria.

#### **Research Questions**

The following questions were raised and answered:

- 1) Does computer technician skill bring about job creation in Nigeria?
- 2) Does phone repairing skill enhance job creation in Nigeria?
- 3) Does web designing skill improve job creation in Nigeria?

#### 2. Review of Related Literature

#### Managing Basic Education for Job Creation

Management is generally seen as a process of planning, organizing, directing, staffing, controlling as well as motivating staff and student activities toward the realization of stated objectives. This implies that managing basic education is a way of coordinating the people and activities of basic education in an effective manner in order to realize the predetermined goals. Effective management of Universal Basic Education can contribute to skill development and imparting life skill which are useful in job creation (Abdullahi, 2017).

Computer technician is an individual who identifies troubleshoots, repair computer problem and maintain computer hardware and software issues. It became a driving force in the creation of employment and development of skill required for self- employment. Computer technician have played and are still playing vital role in creating job for individual to earn a living (Ogah& Adebayo, 2014). This implies that, computer technicians perform installation and maintenance or solve problems that people have with their computers.

Phone repairing is one of the vocational skills which has to do with faultfinding of mobile phones, trouble shooting of software problems, rectification and upgrading of software version of mobile phone to meet the customer satisfaction. Mobile phone is prone to developing faults such as earpiece faults, no signal, keypads problem, camera failure, sim lock, call diverts, auto restart and the likes (Jackie, 2012). Repairing are activities that are necessary to maintain the performance of defects system (Abdullahi et al, 2017). Phone repairing in this study involves services taken for restoration of damaged phone devise to a stable and perfect state.

Web designing vocational skill is also one of the mechanisms for job creation or empowering youth. Web designing is the process of creating website which encompasses various aspect such as web page layout, graphic design and content production (Abdullahi et al, 2017). Websites are developed using HTML makeup language to define the content and metadata of webpages while Cascading Style Sheets (CSS) is using for layout and appearance of the elements within a webpage. Maximum numbers of people relying on World Wide Web in their work or business in rising. Generally, people expect to find effective sites to do business as fast and as comfortable as possible. Therefore, usability of web designing is very important.

## Job Creation through Emerging Technologies and Innovation

Job creation has been defined as a process of making job available by improving the skill and knowledge acquire through vocational training in order to become self-reliant (Oladotun, 2020).

Vocational training has contributory factors to empowerment, alleviation of poverty, impoverished communities and job creation.

Emerging technology and innovation bring up the emergency of new knowledge, job and change in existing ones. This study has focused on the role of job creation through technology and innovation. Technology can be seen as the development of specialized technical knowledge and for creating and acquiring value that will lead to a new fulfill job (Kim, et al, 2015). Innovation is an act of introducing or using new ideas, creative thinking and imagination to manipulate or formulate instrument or object that never existed before (Mbanefo & Eboka, 2019). This implies that innovation focused on facilitation and utilization of new knowledge and problem-solving strategies for the purpose of improving quality.

## **3. Theoretical Framework**

The theoretical basis for this study centered on Alderfer (1989) ERG theory as cited in Jane (2012). This theory categorized human needs into three which includes (i) Existence (E) (ii) Relatedness (R) and (iii) Growth (G). The existence need includes the need for basic materials necessary for improving living which comprise of physiological and physical safety needs. The relatedness includes the aspiration for interpersonal relationship with peers, superior or family. Growth need (self-actualization) includes desire need for self-development, personal growth and advancement.

This theory can be applied in an education setting such that school manager should make provision for material needed and resources required for an individual living and prevention from fear, anxiety, danger (physiological & safety need). Also, this theory allows learners involved in different vocational training to prevent all forms of suffering, isolation, loneliness and distance (relatedness need) so as to realize learners' potential and become self-productive, self-reliant and self-development toward job creation (growth need).

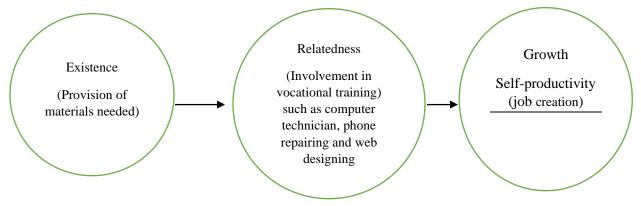


Figure 1. source: Adapted from Jane (2012)

# 4. Methodology

# Research Approach

Quantitative research design was adopted in this study so as to examine the relationship that exist between management of basic education and job creation. It was also considered suitable because of the fact that it helps the researcher to obtain the view of the sampled population, using suitable data analysis to analyze the data collected and reach a justification conclusion about the population from the study findings (Dilliman et al, 2014; Cohen et al 2000).

# Population and Sampling Methods

The target population of this study comprise of 19,436 head teachers, 2,581 principals, 153,234 primary school teachers and 41041 Junior Secondary Schools (JSS) teachers in North-west, Nigeria. Sample of 712 school heads and 765 teachers were selected with the used of Research advisor (2006) table of determining sample size of a known population with (confidence level =95%, Margin of Error = 5%). Proportional random sampling technique was used to select a sample of 377 head teachers, 335 principals, 384 primary school teachers and 381 JSS teachers in each State by selecting the sample proportionally from the population as shown in table 1. Stratified random sampling techniques were used in selecting the participants so as to ensure that every member of the selected sample was given equivalent chance of being selected (Creswell, 2015). In view of this, all categories of school heads and teachers were represented in this study.

<b>Table 1: Population Sample</b>	of Head of Schools and Tead	chers of Basic Education
Tuble 1.1 opulation Sumple	of ficua of behoods and feat	mens of Dusic Luucution

S/N	North- west States	Number of pri.Schools	Number of JSS	Selected head teachers	Selected principals	Number of pri. Sch. Teachers	Number of JSS teachers	Selected pri. Sch. Teachers	Selected JSS teachers
1	Jigawa	1,998	424	39	55	13,102	6,324	33	59

2	Kaduna	4,225	411	82	53	25,604	5,369	64	50
3	Kano	5,732	875	111	114	51,043	12,006	128	111
4	Katsina	2,217	246	43	32	19,298	5,455	48	51
5	Kebbi	1,990	267	39	35	13,764	4,226	35	39
6	Sokoto	1,729	177	33	23	18,888	4,421	47	41
7	Zamfara	1,545	181	30	23	11,535	3,213	29	30
	Total	19,436	2,581	377	335	153,234	41,041	384	381

Source: National Personnel Audit Report (2019)

## Instrumentation

The research instrument for this study was a self-designed questionnaire titled "Managing Basic Education Questionnaire (MBEQ)" and adapted questionnaire titled Job Creation through Emerging Technologies Questionnaire (JCETQ) were used in this study. A total of 20 items were used to measure managing basic education with three sub-variables: computer technician (6 items), phone repairing (6 items) and web designing (8 items). The items of questionnaire regarding job creation were concluded from Ogah and Adebayo (2014) on computer engineering with (5 items), Jackie (2012) on mobile phone engineering with (5 items) and Etubon et al (2018) on web designer with (7 items). Participants answered to four Likert scale point as follow: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2 and Strongly Disagree (SD) = 1. The criterion mean is given thus: 4 + 3 + 2 + 1/4 = 2.50. The criterion mean posits that any item that is above or equal to the criterion mean value of 2.50 is agreed while the value below the criterion mean value is disagreed by the participants (Allen & Christopher, 2007; Patton, 2002) resolved that 4-point Likert scale answer format was faster and easier to complete than 5 to 7 -point scales answer format.

## Validity and Reliability

Validity of the instrument was done by giving the draft copies of the instrument to two experts in measurement and evaluation and two experts in educational management to check the relevance and suitability of the instrument. The questionnaire was corrected and adjusted based on experts' recommendations and comments. Furthermore, 30 copies were also administered to participants who are part of the sample to observe their understanding of instructions, wording, and scaled in order to determine if there may be any challenges when filling the questionnaire. Therefore,

some suggestions made were modified correctly before sending the final copies. The reliability of the instrument was done with the use of Cronbach's alpha as revealed in Table 2.

Variables	Sub-construct	N	Cronbach's alpha	Decision
Managing basic education	Computer technician	6	0.84	All items are suitable and dependable
	Phone repairing	6	0.86	All items are suitable and dependable
	Web designing	8	0.82	All items are suitable and dependable
Job creation through emerging technology	Computer engineer	5	0.86	All items are suitable and dependable
	Mobile phone engineer	5	0.80	All items are suitable and dependable
	Web designer	7	0.82	All items are suitable and dependable

 Table 2: Reliability Test for MBEQ and JCETQ

Table 2 reveals the results of reliability test for MBEQ for managing basic education, these are computer technician, phone repairing and web designing. Cronbach's alpha value for computer technician is 0.84 with 6 items, 0.86 for phone repairing with 6 items and 0.82 for web designing with 8 items. Also, on job creation variable, the Cronbach's alpha value sub-constructs are 0.86 for computer engineer, 0.80 for mobile phone engineer and 0.82 for web designer. Values above 0.70 are considered suitable and dependable (Diamantopoulos et al, 2012; Gay, et al, 2009)

## Data Collection Technique

The questionnaire was distributed to the participants of the sample public primary and junior secondary schools with the help of three trained research assistants to ensure maximum response rate. Effective distribution of the instruments to the participants was also aided with the help of colleagues in the sample schools. The questionnaire was administered to over 300 participants in the selected field of study. The introduction, explanation, distribution, completion and collection of questionnaires ranged from 20-30 minutes per school. However, in some schools, researcher and research assistants had to collect the questionnaires in few days' time due to several circumstances such as unavailability of school heads or time. Also, a total of 261 questionnaires

were retrieved and filled properly. The retrieved number meet the suggestion of Research advisor (2006) with a number of 248 used in this study. Participants were required to complete the questionnaires instantly, the researcher and her colleagues, after the completion went round and collected the completed questionnaires for computation and analysis. Furthermore, permission was sought from the participants before distributing the questionnaire in order to adhere to ethical issues. In the guideline of Hesse-Biber & Leavy, 2011 that emphasized the ethical consideration and safety of participants right by guaranteeing that participants are preserved with adequate respect beyond what may be required by law.

# Data Analysis

Descriptive statistics such as mean and standard deviation was used to examine the objective of the study from the data collected. Inferential statistics like Pearson product moment correlation and linear multiple regression statistical analysis was used to test the hypotheses at (0.5) significance level to determine the rejection or acceptance of the hypothesis (Neuman, 2013; Mayer, 2013). The data gathered was coded into the statistical package for social science (SPSS) version 25 software for statistical analysis to compile data from questionnaire on management of basic education and job creation (Dillman et al 2014).

## 5. Findings

## Demographic Information of the Participants

This part discusses the demographic data of the participants using simple percentage.

		N= 1,477	Percentage (%)
Gender	Female	549	37%
	Male	928	63%
		1,477	100%
Age	20-30	344	23%
-	31 -40	412	28%
	41-50	334	23%
	51 above	378	26%
		1,477	100%
Years of teaching	1- 10 years	344	23%
experience	11-20 years	421	29%
	21 years and above	712	48%
		1,477	100%
Level of education	NCE	656	44%
	Bachelor's degree	795	54%
	Master's degree	26	2%
		1,477	100%

 Table 3. Demographic data of the participants

Table 3 reveals the demographic data of the participants that participated in this study. Majority 928 (63%) participants are Male and 549 (37%) are Female. Based on average age, majority 412 (28%) of the participants are between ages 31-40 years while 334 (23%) of the participants are 41-50 years. In terms of level, majority 795 (54%) are bachelors' degree-holders while 26 (2%) are Master's degree holders.

## Positive Mental Attitude

# RQ 1: Does computer technician skill bring about job creation in Nigeria?

Table 4 shows the mean and standard deviation responses of students on positive mental attitude in Nigeria.

S/N	Computer Technician Skill	Head School Respor Mean	ises	Teache Respoi Mean	nses	Decision
1	Helps leaner to have thorough knowledge of operating system	2.86	0.952	2.96	0.910	Agreed
2	Impacts in learner excellent problem- solving skill.	2.92	0.953	2.88	0.962	Agreed
3	Helps learner to be organized while carried out activities.	2.78	1.034	2.91	0.959	Agreed
4	Helps learner aware of electrical safety issues	2.88	0.912	2.80	1.002	Agreed
5	Gives room for demonstration of knowledge and imparting skills.	2.96	0.951	2.88	0.956	Agreed
6	Gives room for an introduction to professional studies in engineering and related field.	2.88	0.961	2.93	0.964	Agreed
	Overall mean	2.88	0.961	2.89	0.959	

 Table 4. Mean and Standard Deviation of Items on Computer Technician Skill

The overall perception of the participants on computer technician skill as revealed in table 4 is interpreted as "Agreed" (M = 2.88, SD = 0.961) and (M = 2.89, SD = 0.959). This reveals that participants agreed that computer technician skillbrings about job creation in Nigeria. Also, all the responses obtained mean values higher than the criterion mean value of 2.50. This shows that participants agreed that computer techniciani)helps learner to have thorough knowledge of operating system (M = 2.86, SD = 0.952) and (M = 2.96, SD = 0.910)., ii) impacts in learner excellent problem-solving skill.(M = 2.92, SD = 0.953) and (M = 2.88, SD = 0.962)., iii) helps

learner to be organized while carried out activities (M = 2.78, SD = 1.034) and (M = 2.91, SD = 0.959)., iv) helps learner aware of electrical safety issues(M = 2.88, SD = 0.912) and (M = 2.80, SD = 1.002)., v) gives room for demonstration of knowledge and imparting skills (M = 2.96, SD = 0.951) and (M = 2.88, SD = 0.956)., vi) gives room for an introduction to professional studies in engineering and related field (M = 2.88, SD = 0.961) and (M = 2.93, SD = 0.964)

# Creativity

# RQ 2: Does phone repairing skill enhance job creation in Nigeria?

Table 5 presents the analysis of participants responses on creativity and skill gap in Nigeria.

S/N	Phone Repairing Skill	Head School	of s	Teacl Resp		Decision
		Respor	ises	Mean	SD	
		Mean	SD			
7	Encourages students to establish new ways of innovative skill in running a business.	2.88	0.969	2.91	1.003	Agreed
8	Helps learners to be disciplined and dedicated troubleshooter.	2.91	1.032	2.89	0.991	Agreed
9	Helps learner have strong work ethics and integrity to establish own's business.	2.92	0.954	2.90	0.988	Agreed
10	Makes learner to be adaptive with changing ad evolving world.	2.86	0.912	2.92	0.979	Agreed
11	Improves learner skill in using tools and materials for production	2.96	0.973	2.88	0.958	Agreed
12	Develop learner creativity.	2.88	0.961	2.92	0.951	Agreed
	Overall mean	2.90	0.967	2.91	0.978	

# Table 5. Mean and Standard Deviation of Items on Phone Repairing Skill

Table 5 reveals the overall perception of participants on phone repairing skill is interpreted as "Agreed" (M = 2.90, SD = 0.967) and (M = 2.90, SD = 0.967). This shows that participants agreed that phone repairing skill enhance job creation in Nigeria. Also, all responses obtained mean values higher than the criterion mean value of 2.50. This reveals that participants agreed that phone repairing) encourages students to establish new ways of innovative skill in running a business(M = 2.88, SD = 0.969) and (M = 2.91, SD = 1.003), ii) helps learners to be disciplined

and dedicated troubleshooter(M = 2.91, SD = 1.032) and (M = 2.89, SD = 0.991), iii) helps learner have strong work ethics and integrity to establish own's business (M = 2.92, SD = 0.954) and (M = 2.90, SD = 0.988), iv) makes learner to be adaptive with changing ad evolving world (M = 2.86, SD = 0.912) and (M = 2.92, SD = 0.979), v)improves learner skill in using tools and materials for production (M = 2.96, SD = 0.973) and (M = 2.88, SD = 0.958), vi) develop learner creativity(M = 2.88, SD = 0.961) and (M = 2.92, SD = 0.978).

# Self-confidence

# **RQ 3: Does web designing improve job creation in Nigeria?**

Table 6 shows the analysis of the participants' responses on self-confidence and skill gap

S/N	Web Designing Skill	Head School Respon Mean	nses	Parti Respo Mear		Decision
13	Helps learner to develop skill in designing websites and blogs creation	2.87	0.993	2.82	0.958	Agreed
14	Develops skill in programming and database thereby empowering learner to be self-employed.	2.85	1.037	2.91	1.034	Agreed
15	Improves skills in training learner with the way of operating computer.	2.92	0.966	2.97	0.954	Agreed
16	Helps learner develop ability to organize and build network of business.	2.89	0.976	2.86	0.914	Agreed
17	Promotes the development of social and interpersonal skills.	2.92	0.963	2.78	1.033	Agreed
18	Promotes the sprits of self-efficacy, optimism and resilience in students.	2.88	0.961	2.98	0.961	Agreed
19	Helps learner to develop skill to be critical to come up with innovative ideas	2.90	0.954	2.92	0.998	Agreed
20	Helps learner to establish their own business and connect with global markets	2.86	0.966	2.84	0.922	Agreed
	Overall Mean	2.87	0.977	2.87	0.993	

Table 6 shows the overall perception of participants on web designing skill is interpreted as "Agreed" (M = 2.87, SD = 0.977) and (M = 2.87, SD = 0.993). This shows that participants agreed that web designing skill improves job creation in Nigeria. Also, all responses obtained mean values higher than the criterion mean value of 2.50. This shows that participants agreed that web designing skill helps learner to develop skill in designing websites and blogs creation (M = 2.87, SD = 0.993) and (M = 2.82, SD = 0.958), ii) develops skill in programming and database thereby empowering learner to be self-employed (M = 2.85, SD = 1.037) and (M = 2.91, SD = 1.034), iii) improves skills in training learner with the way of operating computer(M = 2.92, SD = 0.966) and (M = 2.97, SD = 0.954), iv) helps learner develop ability to organize and build network of business (M = 2.89, SD = 0.976) and (M = 2.86, SD = 0.914), v) promotes the development of social and interpersonal skills (M = 2.92, SD = 0.963) and (M = 2.78, SD =1.033), vi) promotes the sprits of self-efficacy, optimism and resilience in students (M = 2.88, SD = 0.961) and (M = 2.98, SD = 0.961), vii)helps learner to develop skill to be critical to come up with innovative ideas (M = 2.90, SD = 0.954) and (M = 2.92, SD = 0.998) and viii) Helps learner to establish their own business and connect with global markets (M = 2.86, SD = 0.966) and (M = 2.84, SD = 0.922).

#### **Research Hypotheses**

The following hypotheses were formulated and tested:

- There is no significant relationship between computer technician skill and job creation in North-west, Nigeria.
- There is no significant relationship between phone repairing skill and job creation in North-west, Nigeria.
- There is no significant relationship between web designing skill and job creation in North West Zone, Nigeria
- There is no significant relationship between management of basic education and job creation in North-west Zone, Nigeria

# Hypotheses Testing

Pearson product moment correlation coefficient statistic and linear regression analysis was used to test the set hypotheses in this study as follows:

**H**<sub>01</sub>: there is no significant relationship between computer technician skill and job creation in North-west, Nigeria.

		Computer Technician Skill	Job Creation
Computer Technician Skill	Pearson Correlation	1	.920**
	Sig. (2-Tailed)		.000
	N	1476	1476
Job Creation	Pearson Correlation	.920**	1
	Sig. (2-Tailed)	.000	
	N	1476	1476

Table 7. Correlation Analysis for Computer Technician Skill and Job Creation

Table 7 shows that computer technician skill has significant and positive relationship with job creation through emerging technologies with calculated r-value = .920; p < .000. This shows that there is a significant relationship between computer technician and job creation through emerging technologies in Nigeria (Choy, 2014; Mugenda & Mugenda, 2013)). Therefore, the hypothesis which states that there is no significant relationship between computer technician skill and job creation is rejected.

Ho2: there is no significant relationship between phone repairing skill and job creation in North west, Nigeria.

		Phone Repairing Skill	Job Creation
Phone Repairing Skill	Pearson Correlation	1	.910
	Sig.		.000
	(2-Tailed)		
	Ν	1476	1476
Job Creation	Pearson Correlation	.910	1
	Sig.	.000	
	(2-Tailed)		
	N	1476	1476

 Table 8. Correlation Analysis for Phone Repairing Skill and Job Creation

Table 8 signifies that phone repairing skill has a significant positive relationship with job creation with calculated r-value = .910; p < .000. This shows that there is a significant relationship between phone repairing and job creation through emerging technologies in Nigeria (Creswell, 2015; Miller et al, 2011). Thus, the hypothesis which states that there is no significant relationship between phone repairing skill and job creation is rejected.

Ho3: there is no significant relationship between web designing skill and job creation in Northwest, Nigeria

		Web Designing Skill	Job Creation
Web Designing Skill	Pearson Correlation	1	.840**
	Sig.		.000
	(2-Tailed)		
	N	1476	1476
Job Creation	Pearson Correlation	.840**	1
	Sig. (2-Tailed)	.000	
	N	1476	1476

Table 9. Correlation Analysis for Web Designing Skill and Job Creation

Table 9 shows that web designing skill has a significant and positive relationship with job creation with calculated r-value = .840; p < .000. This reveals that there is a significant relationship between web designing and job creation through emerging technologies in Nigeria (Fayers & Machin, 2010; Yilmaz, 2013). Hence, the hypothesis which states that there is no significant relationship between web designing skill and job creation is rejected.

# Linear Regression Analysis

# **Objective 4: Investigate the relationship between management of basic education and job creation in North-west, Nigeria**

This part shows the linear regression finding that analyzed the relationship between management of basic education and job creation in North-west, Nigeria

Table 10. Linear Regression of Management of Basic Education and Job Creation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.523	0.585	0.526	0.342

a. Predictors: (constants), computer technician, phone repairing and web designing

Table 10 shows that management of basic education has significant influence on job creation with 0.585 of R square value from the table. Therefore, the result shown that management of basic education has positive effect on job creation (Creswell & Creswell, 2017).

Model		Unstandardized coefficient		Standardized coefficient	Т	Sig.
		В	Std. Error	Beta		
	(Constant)	.676	0.154		4.267	0.000
	Computer technician skill	0.341	0.050	0.368	7.970	0.000
	Phone repairing skill	0.318	0.034	0.326	6.410	0.000
	Web designing skill	0.311	0.030	0.311	5.652	0.000

 Table 11. Linear Regression Coefficient for Management of Basic Education and Job Creation

a. Dependent Variable: Job creation

Table 11 shows the results of running linear regression model that include the standard regression weight of the beta coefficients value for management of basic education was .676 which shows that effective management of basic education improve job creation. Also, indicated that management of basic education and job creation were undeniable related. T-test of 4.267 was sufficiently high with corresponding p-value of 0.000. Therefore, in comparison, computer technician has the highest impact (Beta = 0.368) follow by phone repairing (Beta = 0.326) and web designing (Beta = 0.311). Therefore, there is perfect and significant relationship among management of basic education variables in term of computer technician, phone repairing, web designing and job creation.

## 6. Discussion

Table 4 findings shows that computer technician skill brings about job creation in Nigeria, such that it helps leaner to have thorough knowledge of operating system, impacts in learner excellent problem-solving skill; learner to be organized while carrying out activities; learners are also aware of electrical safety issues, gives room for demonstration of knowledge and impacting skills, as well as gives room for an introduction to professional studies in engineering and related field. Results from hypothesis one shows that there is significant and positive relationship

between computer technician skill and job creation in Nigeria. The finding concurred with Monday and Johnson (2013) that computer technician skill played an essential role in creating jobs for students. The finding is in line with Mbanefo and Eboka (2019) that basic education science skill will bring about job creation in Nigeria. This finding also agreed with Abdullahi (2019) that technology constitute the pillar on which the progress and development of both the individual and the nation depends.

The findings in Table 5 reveals that phone repairing enhance job creation in Nigeria, such that it encourages students to establish new ways of innovative skill in running a business, helps learners to be disciplined and dedicated troubleshooter, learner have strong work ethics and integrity to establish their own business, makes learner to be adaptive with changing and evolving world, improves learner skill in using tools and materials for production as well as develops learner creativity. Results from hypothesis two reveals that there is a significant and positive relationship between phone repairing skill and job creation in Nigeria. This finding agreed with Abdullahi et al (2017) that phone repairing enhance self-reliance in business education students. This finding also agreed with Ogah and Adebayo (2014) that creativity helps to stimulate students with the ability to discover business opportunities to earn a living.

The findings in Table 6 shows that web designing skill improve job creation in Nigeria. such that it helps learner to develop skill in designing websites and blogs creation, develops skill in programming and database thereby empowering learner to be self-employed, improves skills in training learner with the way of operating computer, learner develop ability to organize and build network of business, promotes the development of social and interpersonal skills, promotes the sprits of self-efficacy, optimism and resilience in students, helps the learners to develop skill that makes them critical to come up with innovative ideas as well as help learner to establish their own business and connect with global markets. Results from hypothesis three reveals that there is a significant and positive relationship between web designing skill and job creation in Nigeria. This finding is in line with to Bosman and Fernhaber (2018) that creativity of web designing skill creates a positive contribution to organisation innovation and development. This finding concurred with Etubon et al (2018) that web designing skill equipped learners with appropriate life skill and knowledge to empower them for self-reliance and self-employment after school.

The finding of regression analysis shows that there is perfect relationship between management of basic education and job creation in north-west, Nigeria. The findings agreed with Mbanefo and Eboka (2019) that innovative skill improve learners to be independent, imaginative and have business managerial skill for managing and sustaining businesses. This finding conforms to Umunadi (2014) that inculcating vocational skill in learners at basic level help to explore opportunities for innovation and creative ideas through practical and involvement in technology activities.

#### 7. Limitation and Conclusion

For the fact that, this research provides significant insights regarding the role of basic education on job creation through emerging technology and innovation, a couple of research limitation are suggested to improve future research. Basic education innovative skill can be measured with other variables aside the variables used in this study. This type of study can also be carried out at post basic and tertiary education. The analysis on the variables for job creation was analyzed and the result indicated that computer technician, phone repairing and web designing skills were key significant determinants of job creation in Nigeria. The findings of this study will be of benefit to learners to exhibit innovative skills in establishing business opportunities in their chosen career. This study will also be of help to government, educational managers and stakeholders concern to effectively manage basic education by providing adequate resources to enhance different innovative skills towards job creation. Also, this finding would serve as a reference point for further research in the field of education.

#### 8. Recommendations

School managers should focus more on computer technician skill in basic education in order to help learners to be self-reliant and self- developed, impacts in learner excellent problem-solving skill, help learner to be organized while carrying out activities, aware of electrical safety issues, gives room for demonstration of knowledge and imparting skills, as well as gives room for an introduction to professional studies in engineering and related field. Also, school managers should continue encouraged effective phone repairing training in basic education so as to inspire learners to establish new ways of innovative skill in running a business, help learners to be disciplined and dedicated troubleshooter, learner have strong work ethics and integrity to establish their own business, make learner to be adaptive with changing and evolving world,improve learner skill in using tools and materials for production as well as develops

learner creativity. Furthermore, web designing skill should be sustained in basic education in line with emerging technology for the purpose of meeting the needs of learners in terms of helping learner to develop skill in designing websites and blogs creation, developing skill in programming and database thereby empowering learner to be self-employed, improving skills in training learner with the way of operating computer, developing ability to organize and build network of business, promoting the development of social and interpersonal skills, promoting the sprits of self-efficacy, optimism and resilience in students, developing skill that makes them critical to come up with innovative ideas as well as helping learner to establish their own business, connect with global markets and job creation.

## References

- Abdullahi, D. U. E., Fadilah, K., & Aminu, H. (2017). Infusing phone repairs in business education minimum standard as sustainable development goal. Paper presented at 10<sup>th</sup> annual National Conference and Exhibition, at Nasir Ahmed El-Rufai Hall, Federal College of Education Zaria, Kaduna State. Dated July 11-14, 2017.
- Abdullahi, N. J. K. (2019). Managing functional basic education for sustainable leadership in Nigeria. *Journal Pendidikan Humaniora*, 7(4), 124-132.
- Abdullahi, N. J. K. (2017). Managing universal basic education for breaking poverty circle in Nigeria. *KIUJournal of Social Humanities*, 2(2A), 39-46.
- Alderfer, C. (1989). Theories reflecting my personal experience and life development. *Journal of Applied Behavioural Science*, 25(4), 351-361.
- Allen, I. E. & Christopher, A. S. (2007). Likert scales and data analyses. *Quality Progress*, 40(7),64-65.
- Bosman, L., &Fernhaber, S. (2018). Teaching the entrepreneurial mindset to engineer. Springer International Publishing AG. Doi: 1007/978-3-319-61412-0\_2.
- Choy, L. T. (2014). The strengths and weaknesses of research methodology: Comparison and complimentary between qualitative and quantitative approaches. *Journal of Humanities and Social Sciences*, *19*(4), 99-104
- Cohen, L., Mainion, L., & Morrison, K. (2000). *Research methods in education* (5<sup>th</sup> ed,). London: Routledge Falmer.
- Creswell, J. W. (2015). *Aconcise introduction to mixed methods research*. Thousand Oaks, California: SAGE.

- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative and mixed methods approach*, USA: Sage Publication
- Diamantopoulos, A., Marko. S., Chrisoph, F., Petra, W. & Sebastian, K. (2012). Guideline for choosing between multi-item and single-item scales for construct measurement: A predictive validity perspective. *Journal of the Academy of Marketing Science*, 40(3), 434-449.
- Dillman, D. A., Jolene, D., & Leah, M. C. (2014). Internet, phone, mail and mixed mode surveys: The Tailored design method (4<sup>th</sup> ed.). Hoboken, NJ: John Wiley.
- Etubon, R. U., Akpa, A. O, & Udosen, I. N. (2018). Socio-economic empowerment of senior secondary science students in Nigeria and STEM teachers' preparedness. *Research Journal* of Education, 4(11), 204-211.
- Fayers, P. M., & Machin, D. (2010). *Quality of life: Assessment, analysis and interpretation*. John Wiley and Sons, London
- Gay, L. R., Mills, G. E., & Airasian, P. (2009). Educational research: Competencies for analysis
- Hesse-Biber, S. & Leavy, P. (2011). *The practice of qualitative research*. Thousand Oak, CA:
- Jane, R. C. (2012). The development and use of the theory of ERG: A literature Review. *Emerging Leadership Journal*, 5(1), 2-8
- Jackie, J. (2012). Common mobile phone issues solutions. Available at http://www.technol.net/2012/07common mobile-phone-issues-and-solution.html.
- Isaboke, P. K. N. (2019). Technical and vocational education training institutions way of future youth empowerment and creation of market-oriented job opportunity in Rwanda. *International Journal of Research in Sociology and Anthropology*, 5(4), 20-32.
- Kim, J. H. Yoon, S. J. & Ahn, J. K. (2015). An empirical analysis of characteristics and job creation in technical based start-ups, *Korea Review Applied Economics*, *17*, 167-193.
- Mayer, A. (2013). *Introduction to statistics and SPSS in psychology* (1<sup>st</sup> ed.) England: Pearson Education Limited.
- Mbanefo, M. C., & Eboka, O. C. (2019). Acquisition of innovative and entrepreneurial skill in science education for job creation in Nigeria. *Science Education international Journal*, 28(3), 207-213.

- Mbanefo, M. C. (2015). Developing creative thinking skills in basic science students: Prospect and challenges. *Journal of Science Teachers Association of Nigeria.*, 50(1), 207-216.
- Miller, V. D., Poole, M. S, Seibold, D. R., Myers, K. K., Hee Sun, P., & Monge, P. (2013). Advancing research in organizational communication through quantitative methodology. *Management Communication Quarterly*, 25(1), 4-58.
- Monday, A. A., & Johnson, A. A. (2013). Graduate unemployment in Nigeria: Entrepreneurship and venture capital nexus. *Journal of Economics and Sustainable Development*, 4(9), 75-84.
- Mugenda, A., & Mugenda, O. (2013). *Research methods: Qualitative and quantitative approaches*. Nairobi: ACTS Press.
- Neuman, W. L. (2013). *Social research methods: Qualitative and quantitative approaches*. USA: Pearson Education.
- Ogah, A. V. & Adebayo, A. P. (2014). Information and communication technology: A panacea for alleviating unemployment in Nigeria. *Policy Brief Series-Education & Science Journal*, 4(1), 168-176.
- Oladotun, O. O. (2020). Adult literacy and skill acquisition programmes as correlates of woman empowerment and self-reliance in Gambia. *Education Research International*, *1*, 1-8
- Patton, M. Q. (2002). *Qualitative research and evaluation methods*. 3<sup>rd</sup> Sage Publications: Thousand Oaks, CA.
- Research Advisor (2006). Sample size table. <u>http://www.reseach-advisor.com</u>
- Umunadi, E. K. (2014). Acquisition of entrepreneurial technical education skills for global competitive and job creation. *International Journal of Educational Research*, *13*(1), 128-144.
- Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: Epistemological, theoretical, and methodological differences. *European Journal of Education*, 48(2), 311-325.