

# **PRACTICAL TECHNOLOGICAL SKILLS IMPROVEMENT NEEDS OF EDUCATIONAL TECHNOLOGY PRACTITIONERS IN NIGER STATE, NIGERIA**

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## **Abstract**

*This study assessed practical technological skills improvement needs of educational technology practitioner's in Niger state, Nigeria. The study adopted a descriptive survey research design. The study was guided by three research questions. The population of this study comprised of all Educational technology practitioners in Niger State. A sample of 66 educational technology practitioners were selected using Purposive Sampling Technique. A researcher-designed structured questionnaire was used for data collection and was validated by five experts. The questionnaire was pilot tested and the data obtained were subjected to statistical analysis using Cronbach Alpha Correlation Formula and reliability coefficients of 0.91 and 0.85 were obtained for practical technological skills required and possessed by Educational technology practitioners respectively. Descriptive statistics of Mean, Mean Rank and Standard Deviation were used to answer the research questions. Findings of the study revealed practical technological skills are required and possessed by Educational technology with grand means of 2.98 and 2.87 respectively. Use of Edmodo to share text, video, homework and assignment with students and teaching of students how to make their own web page were practical technological skills not possessed by educational technology practitioners in Niger State and were ranked 14th and 15th with mean of 2.44 and 2.42 respectively. In light of the findings, it was recommended among others that educational technology practitioners should be encouraged to acquire the needed skills and abilities; enabling environment that would enable them utilise these possessed skills should be provided.*

**Keywords:** practical, technological, skills, improvement, needs

## **Introduction**

The integration of technology into education has given rise to educational technology or instructional technology which entails the embedding of hardware and software as tools for teaching and learning process (Owolabi, 2020). Hence, the 21st-century classroom is equipped with technological tools, gadgets and devices to enhance the teaching and learning process. Educational technology which is devoted to design, development, and application of divers media, technologies and tools in teaching and learning intended to promote and enhance teaching and learning. British educational communication and technology (BECTA, 2018). Educational technology as a study and ethical practice, comprise of facilitation of learning and improving performance by creating, using, and managing appropriate technological processes and resources (hardware and software) in a systematic and interactive process of designing instruction to improve educational performance. Similarly, Chisale (2021) defined educational technology as both a process and product, educational technology as a product involves the utilization of particular devices by educational technology practitioners for teaching and learning. As a field, educational

technology emphasizes communication skills, problem solving ability, and approaches to teaching and learning through the judicious use and integration of diver's media into teaching and learning by educational technology practitioners (Arockiasamu, 2018).

Educational technology practitioners are individuals in the field of educational technology confined with the responsibilities to help others acquire knowledge, gain competences or values and technological skills in preparation for graduation and future employment, western governors University (WGU, 2021). These practitioners include educational technology lecturers, instructional designers, technical support staffs, media technologies, and private practitioners among others. Educational technology practitioners possess the capacity and practical technological skills to integrate the right technologies in the right content and right pedagogy to inculcate instructions in the students. An educational technology practitioner is always dynamic and believes in change and have the capacity to prepare future leaders and develop in them the skills that they may need to succeed, teachers certificate Degree (TCD, 2021). Hence, it is essential for them to be technologically savvy, organized, and possess practical technology skills. These practitioners must always be abreast with recent innovations and technologies because of the daily emergence of new technology devices or tools. This could be through workshop organization, seminars, training, in-service, through self-development and working experiences. Educational technology practitioners are individuals who work with school representatives, administrative, and teachers to implement technological solutions in classrooms and other education settings.

Educational technology practitioner advocates for the use of appropriate technology in an academic settings, and help schools use technology to make classroom learning exciting without compromising the integrity of the learning environment. It is the responsibility of Educational technology practitioners to help schools integrate technologies in their classrooms and also educate teachers and non-teaching staffs about programmes that can help make other aspect of student management easier (WGU, 2021). The effective and efficient utilization of technology by educational technology practitioner will enable students to use computer as well as other technologies for learning and problem-solving which is a paramount skill in this 21st-century. In addition the utilization of educational technology devices could save time and improve the effectiveness of students' learning efforts, and student overall learning. It will creates the right learning environments where students are further inspired to attend, and have a better opportunity of communication, collaboration and have greater likelihoods of using higher order thinking and problem-solving skills.

With Educational technology, teachers as educational technology practitioners can upgrade and improve the learner-centeredness of their classroom. It is paramount for educational technology practitioners to integrate technologies in teaching and learning and have strong problem-solving skills, teaching experience, knowledge of classroom management and how technologies are actually used in a classroom setting. Hence, it is necessary for educational technology practitioners to be competent at work and possess the relevant knowledge, and practical skills of integrating all technology tools for effective teaching and learning. This skills involve the ability to write software or website, modules to support classroom activities (Chisale, 2021). Tukur (2018) defined skills as the ability to perform a task with some degree of expertise or proficiency displayed in the

performance of a given task. Skills could also be the manifestation of acquired knowledge by an educational technology lecturer that is translated into practical activity or performance of operational task which can be called technological skills.

Technological skills are important in every field of endeavours, since the performance or execution of any job requires the use of multiple skills. Practical technology skills are specifically important in all technologically related discipline without which work cannot be carried out. Practical technology skills allow educational technology practitioners to use their acquired skills and expertise in performing physical or digital tasks with computer and other technology devices for content delivery to students. Practical technology skills are necessary for an educational technology practitioner to be competent in his job in integrating technology in teaching and learning process, designing, evaluating technology media and operation of media (Chisale, 2021).

Practical technology skills enables educational technology practitioners to operate computer, surf the internet, mounting and operating the projector, using document camera, and to download and upload materials and also to use the power point and edit document from the net. These skills and abilities are required by educational technology lecturers in order to discharge their primary duty more efficiently, since they use technology tools and media for teaching and learning. Educational technology practitioner must possess the requisite qualification of both the manipulative skills and other theoretical knowledge to carry out their duties effectively (Chisale, 2021). Therefore, an educational technology practitioner is expected to possess practical technology skills to be able to operate the computer and other related media for successful lesson delivery (Tukur, 2018).

Technical skills are job-specific or related skills that is required for the performance of a particular job in every field of endeavours, and educational technology as a field of study is not an exceptional since it involves the use of technology tools to deliver and enhance teaching and learning, so its practitioners must possess the needed skills to be able to properly mix the right technology, pedagogy, and content for effective teaching and learning. Realizing the daily advent of new technologies as a result of the advancement by ICT, skills requirement becomes necessary to bridge the gap to attained professionalism and to reach the peak of career in the working place (Chisale, 2021). Practical technological skills required in the field of educational technology include: the application of computer and computer related tools that requires hands on tools such as the use of white board, document camera, virtual meeting and classroom, the use of power point, website search, website design dawn loading of materials from the web, editing and uploading assignment for student among others. However, Tukur (2018) observed that majority of educational technology practitioners have failed in discharging their duties by neglecting the integration of technology media in the teaching and learning, concentrating only on the theoretical aspect due to lack of sufficient knowledge and skills. The non-integration of technologies by educational technology practitioners could be attributed to insufficient possession of required practical technological skills by educational technology practitioners. Which is a determinant factor for improvement needs of educational technology practitioners.

Improvement can be referred to as a change for the better, progress and development. Skills improvement need refer to what is required. Therefore, improvement need can be referring to a gap between the skills possessed and the skills needed to enables the teacher to teach effectively

(Tukur, 2018). Skills improvement need is the knowledge, attitude and skills required of filling the gap created between the knowledge, attitude and skills possessed by Educational technology practitioners. 21st century, employers and recruiters have realized that it is much easier to train smart individuals how to perform the specifics of any role this is as long as they have already acquire a much harder to teach skills set. This skills set comprises critical thinking, soft skills, strong work ethics skills, computer and electronic skills, mathematics skills, programming attention to detail, self-confidence skills, decisions and solve problem skills, plan, organizing and prioritizing work skills, leadership/management skills, analytical and research skills, flexible/adaptability skills, and interpersonal ability and some basic competency in a few areas of expertise. It is against this that this study intends to assess the influence of years of experience and academic qualifications on practical technological skills improvement need of educational technology practitioners in Niger State.

### **Statement of the Research Problem**

In this fourth education revolution, technology is a major feature in educational activities as its usage is essential for the effective instructional delivery. Globally, educational systems are experiencing digital transformation that is accelerated exponentially by the use of technological driven innovations for teaching and learning which has resulted in a paradigm shift in educational activities and system. The integration of technology in education offers tremendous opportunity to improve access to quality education which can improve learning and enhance employability skills, develop and advance 21st-century skills in learners among which are information and digital literacies, leadership skills, critical thinking, analytical skills, problem solving, and collaboration skills.

The importance of integrating technology in Nigerian's institutions cannot be over- emphasized as it will improve the educational standard of the country benefiting both educators and learners. However, technologies are rarely used in Nigerian's institutions. This in adequate utilisation of technologies in Nigerian institutions can lead to ineffective teaching, and ineffective teaching or poor instructional delivery can lead to poor academic achievement. This poor technology skills by the lecturers will result to poor design of software and other educational resources which will continue to deteriorate the educational system. The inability to use media technology to facilitate and improve teaching and learning in Nigeria may lead to the production of graduates that do not possess the 21st century employability skills and cannot compete in the global market. Similarly, Dikko (2017) attributed the non-utilisation of technologies in Nigerian institutions by educational technology practitioners to their in adequate technology skills and confidence in applying them for instructional purposes. Therefore, it is paramount that the technological skills of the educational technology practitioners should be improved. To improve their technological skills, the practical technological skills possessed must be ascertained and then the practical technological skills required investigated so that proper remediation could be achieved. It is against this, background that the study seeks to investigate the practical technological skills improvement need of Educational technology practitioners in Niger State, Nigeria.

### **Aim and Objectives of the Study**

The aim of this study is to determine the practical technological skills improvement need of educational technology practitioners in Niger State, Nigeria. The specific objectives are to:

1. Determine the practical technological skills required by educational technology practitioners in Niger State,
2. Determine the practical technological skills possessed by educational technology practitioners in Niger State;
3. To determine the skills improvement need of educational technology practitioners in Niger State.

### **Research Questions**

The following research questions are raised and answered in the study:

1. What are the practical technological skills required by educational technology practitioners in Niger State?
2. What are the practical technological skills possessed by educational technology practitioners in Niger State?
3. What are the skills improvement need of educational technology practitioners in Niger State?

### **Research Methodology**

The research design adopted for this study is a descriptive survey design. Descriptive survey design is used to describe the distinctiveness or characteristics of individual or groups in a population or a sample of the population, and the relationship that exist between variables (Devin, 2021). Since, this study assessed practical technology skills improvement needs of Educational technology practitioners in Niger State. Descriptive survey design is considered appropriate for the study. The population of this study comprised of all Educational technology practitioners in Niger State. Purposive sampling was be used to select four tertiary institutions in Niger State where educational technology practitioners work as lecturers, programmers, instructional designers, and support staffs. Hence, the sample size was 66 educational technology practitioners in Niger state.

A researcher developed questionnaire was used for data collection. The questionnaire entitled Practical Technological Skills Improvement Need of Educational Technology Practitioner in Niger State (QPTS) consist of two sections. Section A and B, Section A consist of 15 items titled practical technological skills required by Educational technology practitioners was structured on four-point likert scale of Strongly Disagree (SD) = 1, Disagree (D) = 2, Agree (A) = 3, Strongly Agree (SA) = 4 to elicit data on practical technological skills required by educational technology practitioners in Niger State. Section B consist of 15 items titled practical technological skills possessed by educational technology practitioners was structured on four-point likert scale of Strongly Disagree (SD) = 1, Disagree (D) =2, Agree (A) =3, Strongly Agree (SA) = 4 to collect data on practical technological skills possessed by educational technology practitioners in Niger State. A mean

score of 2.50 and above was considered acceptable mean for agreement while a mean score below 2.50 considered not acceptable.

The developed questionnaire was validated by five experts. Two experts from the department of Educational Technology, Federal University of Technology Minna, One educational technology expert from College of Education Minna Niger State, One Psychologist from College of Education Maiduguri and one expert from Industrial Technology Education (ITE) Federal University of Technology Minna Niger State. All corrections and suggestions were effected in the final draft of the instrument. The corrections of the validators include spelling, tense structure, and suitability, use of language and logical arrangement of the items. To determine the reliability of the questionnaire, a pilot-test was conducted on 10 educational technology practitioners who are randomly selected in private and government owned secondary schools in Minna Niger State who were part of the population but are not part of the sample, the data collected were subjected to statistical analysis using Cronbach Alpha to determine the internal consistency of the items. The reliability coefficients of the different constructs of the instrument obtained were 0.91 for section A and B respectively.

## Results

Research Question One: What are the practical technological skills required by educational technology practitioners in Niger State?

To answer research question one, Mean, and Mean Rank were used as presented in Table 4.1

Table 4.1: Mean and Mean Rank of the practical technological skills required by educational technology practitioners in Niger State

**Table 4.1:** Mean and Mean Rank of the practical technological skills required by educational technology practitioners in Niger State

S/N	Items	N	Mean	Rank	Decision
1	Ability to use the internet to look for information and resources in preparation for lesson	66	3.33	1	Agree
2	Ability to teach the students how to operate the projector and digital camera	66	3.12	7	Agree
3	Ability to understand software copyright ethical and related issues	66	2.98	8	Agree
4	Ability to classify the three technological configuration available Additive, Integrated and Independent	66	2.77	10	Agree
5	Ability to use web board and set up discussion group for the students	66	2.76	12	Agree
6	Ability to create web page and use it for instruction	66	2.67	15	Agree

7	Skills to keep track of new instructional media and their use in teaching and learning	66	2.77	10	Agree
8	Skills for computer security knowledge	66	2.86	9	Agree
9	Skills to use authoring tools to design computer aided instruction	66	2.70	14	Agree
10	Skills to make short video using computer, android phone, and Digital camera	66	3.21	4	Agree
11	Skills to burn text, video on computer disk (CDs) using computer	66	3.26	2	Agree
12	Skills to upload text, sound (audio), pictures, video on the internet using computer	66	3.23	3	Agree
13	Skills to use web blogs for the class	66	2.73	13	Agree
14	Skills to develop course ware for the students	66	3.21	4	Agree
15	Ability to install software into the computer	66	3.15	6	Agree
<b>Grand Mean</b>		<b>66</b>	<b>2.98</b>		<b>Agree</b>

Decision Mean = 2.5

Table 4.1 shows the mean and mean rank of the practical technological skills required by educational technology practitioners in Niger State. The findings indicated that abilities to use the internet to look for information and resources in preparation for lesson was most required for Educational technology practitioners in Niger State with the highest mean of 3.33 and rank first. Skills to burn text, video on computer disk (CDs) using computer, upload text, sound (audio), pictures, video on the internet using computer, develop course ware for the students, make short video using computer, android phone, and digital camera, install software into the computer, teach the students how to operate the projector and digital camera, understand software copyright ethical and related issues of computer security knowledge, classify the three technological configuration available of additive, integrated and independent, use web board and set up discussion group for the students, create web page and use it for instruction are also required by educational technology practitioners in Niger State and were ranked 2nd, 3rd, 4th, 6th, 7th, 8th, 9th, 10th, 12th and 15th respectively.

Furthermore, skills to make short video using computer, android phone, and digital camera, skills for computer security knowledge, keeping track of new instructional media and their use in teaching and learning, use web blogs for the class, use authoring tools to design computer aided instruction are also required by educational technology practitioners in Niger State and were ranked 4th, 9th, 10th, 13th, and 14th respectively. The mean of 2.5 was used as the benchmark. The mean of 2.5 and above was considered ‘Agree’, and the mean of less than 2.5 was considered ‘Disagree’. The table further revealed that the grand mean score response to the 15 items is 2.98, which is above the decision mean; this implies that the various listed practical technological skills are required by educational technology practitioners in Niger State.

Research Question Two: What are the practical technological skills possessed by educational technology practitioners in Niger State?

To answer research question two, Mean and Standard Deviation were used as presented in Table 4.2 **Table 4.2:** Mean and Standard Deviation of the practical technological skills possessed by educational technology practitioners in Niger State.

S/N	Items	N	Mean	Std.	Decision
1	I use power point to illustrate concepts in my teaching	66	2.94	0.86	Agree
2	I use Excel to compute my class scores	66	3.12	0.85	Agree
3	I uses Edmodo to share text, video, homework and assignment with my students	66	2.44	0.90	Disagree
4	I use E-mail to communicate with my students	66	3.12	0.95	Agree
5	I teach my students how to use SPSS in their project	66	2.70	0.86	Agree
6	I teach my students how to make their own web page	66	2.42	0.84	Disagree
7	I teach my students how to save downloaded text, sound, pictures and video materials	66	3.02	0.87	Agree
8	I set up video conferencing and use it to teach	66	2.98	0.85	Agree
9	I teach my students how to use Google classroom	66	2.92	0.86	Agree
10	I troubleshoot various software problem such as translation, compression of image files, and cross-platform issues	66	2.67	0.71	Agree
11	I collaborate with other lecturers on a project through ICT	66	3.05	0.75	Agree
12	I design online tutorship to follow students learning	66	2.76	0.96	Agree
13	I explore website (portals, web pages, electronic magazine Dictionary, search engine) related to my specialty	66	3.11	0.81	Agree

14	I use flash drive, CD-Room, DVD to store important information pertaining my students	66	3.17	1.03	Agree
15	I use smart board to teach	66	2.64	0.91	Agree
<b>Total</b>			<b>2.87</b>	<b>0.87</b>	<b>Agree</b>

Decision Mean = 2.5

Table 4.2 shows the mean and standard deviation of the practical technological skills possessed by educational technology practitioners in Niger State. The mean of 2.5 and above was used as the benchmark for ‘Agree’, and the mean of less than 2.5 is considered ‘Disagree’. Consequently, 15 items were listed. The finding indicated that the use of flash drive, CD-Room, DVD to store important information pertaining students was most possessed for Educational technology practitioners in Niger State with the highest mean of 3.17. Use of E-mail to communicate with students, Excel to compute class scores, website (portals, web pages, electronic magazine Dictionary, search engine) related to specialty, collaboration with other lecturers on a project through ICT, teaching students how to save downloaded text, sound, pictures and video materials, set up and use of video conferencing, use of power point to illustrate concepts in teaching, teach students how to use Google classroom, design online tutorship to follow students learning, teach students how to use SPSS, troubleshoot various software problem such as translation, compression of image files, and cross-platform issues, use of smart board to teach are the practical technological skills possessed by educational technology practitioners in Niger State with mean score of 3.12, 3.11, 3.05, 3.02, 2.98, 2.94, 2.92, 2.76, 2.70, 2.67, and 2.64 respectively. However, use of Edmodo to share text, video, homework and assignment with students and teaching of students how to make their own web page were practical technological skills not possessed by educational technology practitioners in Niger State with mean scores of 2.44 and 2.42 respectively. The table further revealed that the grand mean score response to the 15 items is 2.87, which is above the decision mean; this implies that educational technology practitioners possessed practical technological skills in Niger State.

**Research question three:** What are the skills improvement need of educational technology practitioners in Niger State?

To answer research question three, Mean, and Mean Rank were used as presented in Table 4.3

Table 4.3: Mean and Mean Rank of the practical technological skills possessed by educational technology practitioners in Niger State

S/N	Items	N	Mean	Rank	Decision
1	I use power point to illustrate concepts in my teaching	66	2.94	8	Agree
2	I use Excel to compute my class scores	66	3.12	2	Agree
3	I uses Edmodo to share text, video, homework and assignment with my students	66	2.44	14	Disagree

4	I use E-mail to communicate with my students	66	3.12	2	Agree
5	I teach my students how to use SPSS in their project	66	2.70	11	Agree
6	I teach my students how to make their own web page	66	2.42	15	Disagree
7	I teach my students how to save downloaded text, sound, pictures and video materials	66	3.02	6	Agree
8	I set up video conferencing and use it to teach	66	2.98	7	Agree
9	I teach my students how to use Google classroom	66	2.92	9	Agree
10	I troubleshoot various software problem such as translation, compression of image files, and cross-platform issues	66	2.67	12	Agree
11	I collaborate with other lecturers on a project through ICT	66	3.05	5	Agree
12	I design online tutorship to follow students learning	66	2.76	10	Agree
13	I explore website (portals, web pages, electronic magazine Dictionary, search engine) related to my specialty	66	3.11	4	Agree
14	I use flash drive, CD-Room, DVD to store important information pertaining my students	66	3.17	1	Agree
15	I use smart board to teach	66	2.64	13	Agree
	<b>Total</b>		<b>2.87</b>		<b>Agree</b>

Decision Mean = 2.5

Table 4.3 shows the mean and mean rank of the practical technological skills possessed by educational technology practitioners in Niger State. The findings indicated that the use of flash drive, CD-Room, DVD to store important information pertaining students was most possessed for Educational technology practitioners in Niger State with the highest mean of 3.17 and rank first. Use of E-mail to communicate with students, Excel to compute class scores, website (portals, web pages, electronic magazine Dictionary, search engine) related to specialty, collaboration with other lecturers on a project through ICT, teaching students how to save downloaded text, sound, pictures and video materials, set up and use of video conferencing, use of power point to illustrate concepts in teaching, teach students how to use Google classroom, design online tutorship to follow students learning, teach students how to use SPSS, troubleshoot various software problem such as translation, compression of image files, and cross-platform issues, use of smart board to teach are the practical technological skills possessed by educational technology practitioners in Niger State and were ranked 2nd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, and 13th respectively. However, use of Edmodo to share text, video, homework and assignment with students and teaching of

students how to make their own web page were practical technological skills not possessed by educational technology practitioners in Niger State and were ranked 14th and 15th respectively. The mean of 2.5 and above was used as the benchmark for 'Agree', and the mean of less than 2.5 is considered 'Disagree'. Hence, skills improvement needs of educational technology practitioners in Niger State are skills on the use of Edmodo to share text, video, homework and assignment with students and teach students how to make **their own web page**.

### **Discussion of Findings**

Finding from this study revealed that practical technological skills are required by educational technology practitioners in Niger State, this finding agrees with the finding of Aliyu et al. (2016) whose study showed that 53 ICT competencies were needed by the automobile technology teachers towards the development of ICT for effective teaching-learning purposes in the technical colleges. Similarly, Livinus et al. (2017) findings found out that six skills were required to improve the work skill requirement of students offering Building Construction in technical colleges in Benue state. In addition, Ehimen and Ezeora (2018) finding also showed that technical college graduates needed skills to identify symbols, to use measuring instrument, read blueprint. Surajudeen and Ismail (2018) study also found out that lecturers of technical education and computer education needed capacity building in the operating computer, uploading of text on the internet and videoconferencing for e-teaching in universities. In the same vein, Tella, et al. (2018) study showed that the basic ICT required for recruitment of librarian into the academic and research libraries at the digital age are the specific ICT skills useful and relevant to each unit of the library and the general skills such as word processing, spreadsheets/excel, power point presentations, knowledge of databases, files folders, email/internet, hardware/software, web design and management, mobile technology and social media skills.

Furthermore, Michika and Manabete (2019) findings also revealed that lecturers teaching in polytechnics required ICT peripheral equipment competencies such as use of the digital camera, use of the web camera for internet communication, use of the scanner to copy messages, setting up and using Liquid Crystal Displays (LCDs) and use of a multimedia projector. Idris et al. (202) finding also revealed that technical skills are required for self-reliance in automobile mechanics occupation, automobile diagnostic tools and equipment, technical skills in the servicing, maintenance and repairs of the systems and sub systems of the motor vehicles. Similarly, Wombo (2020) study revealed that ability to operate computer, browse the internet, send and receive text/pictures/sound, participate in video conferencing, burn text/ video on computer discs and upload text/sound/pictures/ video are the technical competencies required for the modern instructional delivery approaches. Offia et al. (2020) finding also revealed that electrical electronics engineering student requires electrical design, and drafting skills, electrical machine operating skills, general safety skills among other technical skills for employment in oil and gas industry.

Discovery from the study revealed that educational technology practitioners possessed practical technological skills in Niger State, this finding agrees with that of Ridwan et al. (2019) whose study revealed that the level of ICT competencies of lecturers in universities in Benue State is high. Similarly, Basil et al. (2020) findings revealed that undergraduate students possessed the

relevant ICT skills that will enhance their learning. Oluseyi, et al. (2020) study also revealed that out of four competencies assessed, two were moderately possessed (planning of instruction and classroom instruction skills) one was fairly possessed (practical demonstration skills) while the remaining one was not possessed (ICT skills). Obiageli et al. (2021) findings also revealed that English language teachers in secondary schools in Awka South possess the basic computer operational skills. However, this finding disagrees with that of Ogwa (2016) whose study revealed that teachers are lagging in their pedagogical skills in planning curriculum, instructional objectives and evaluation in electrical installation trade teaching.

Dzikite et al. (2017) also found out that lecturers lacked adequate technological-pedagogical-content knowledge essential for teaching in the digital society. Similarly, Ademola et al. (2018) study also revealed that most of the lecturers in colleges of education in Nigeria are not proficient in the use of power-point, excel and spreadsheet, cannot apply computers to solve real life academic problems. Jimoh et al. (2018) also revealed that lack of skills and knowledge to operate e-teaching facilities, consistent power failure, poor internet access and connectivity and inadequate knowledge to prepare e-teaching lesson were among the prominent barriers to effective utilization of e-teaching approach. Muhammed et al. (2019) findings revealed that the teachers are lagging in construction of wooden articles. In the same vein, Jimoh, et al. (2020) found out that some work-based skills in manufacturing, marketing, management, quality and safety were not possessed by technical college students.

Findings emanating from this study also revealed that skills improvement needs of educational technology practitioners in Niger State are skills on the use of Edmodo to share text, video, homework and assignment with students and teach students how to make their own web page. This finding agrees with that of Tsojon et al. (2016) who found that all the 64 skill improvement needs identified in the utilization of weather instruments were needed by Lecturers of Agricultural Education in Colleges of Education. Las et al. (2017) study also showed that most of the teachers have a basic knowledge on ICT but needs improvement. Gangbe, et al. (2019) findings also agrees with the finding of this study as it revealed that, ATE lecturers in the institutions need skills improvement training in terms of repairing and maintaining, starting and ignition system, automatic wheel balancing and alignment as well as engine diagnostic and turn up areas in ATE. Patrick (2019) finding also revealed that automobile technicians need improvement in 27 skills for servicing modern automobile engine and its support system. In addition, Asogwa and Okanya (2019) study found out that teachers of carpentry and joinery need improvement in stress grading and Computer Aided Drafting. Patiko et al. (2020) study also found that teachers of introductory technology needed improvement.

## **Recommendations**

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

- i. since, practical technological skills are required by educational technology practitioners, therefore, they should be encouraged to acquire the needed skills and abilities;

- ii. educational technology practitioners possessed practical technological skills, enabling environment that would enable them utilise these possessed skills should be provided;
- iii. educational technology practitioners do not possess practical technological skills on the use of Edmodo to share text, video, homework and assignment with students and teach students how to make their own web page, therefore, conferences, seminars and workshops should be organised for them on how to use Edmodo to share text, video, homework and assignment with students and teach students how to make their own web page;
- iv. adequate training programmes should be organised for educational technology practitioners to equip them with the needed technology skills to use technologies in all areas of educations;
- v. Curriculum planners and developers should plan and develop Educational technology curriculum to integrate practical technological skills required by educationaltechnology practitioners.

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