



# Teachers' perceived usefulness, ease of use, and challenges with e-learning utilization sustainability after COVID-19 pandemic in Oyo state, Nigeria

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## Abstract

This study examined teachers' perceived usefulness, ease of use, and challenges with e-learning utilization sustainability after COVID-19 pandemic. The research was designed as a descriptive survey research and purposive sampling technique was used to select 30 schools and 300 teachers from 630 secondary schools in Oyo State in Nigeria. A questionnaire was developed tagged as teachers' perceptions on sustainable utilization of e-learning after COVID-19 pandemic with a 0.82 reliability index obtained. The data collected were analyzed using simple percentage, mean scores, and standard deviation. The results revealed that teachers' perceived usefulness and ease of use of e-learning were positive and high. In addition, the study has reported that some factors like irregular network service, no direct training for teachers, and many others were identified as challenges to the use of e-learning for instructional delivery. It was recommended among others that policymakers should infuse e-learning instructional strategy into the curriculum for teaching/learning process.

**Keywords:** teachers' perceived usefulness, ease of use and challenges, sustainable utilization, e-learning, instructional strategy

## 1. Introduction

The purpose of education has globally changed from that of producing a literate society to that of producing a learning society. The function of education is to teach individuals to think intensively critically and be useful to the society. The purpose and functions were almost thwarted when the novel coronavirus disease 2019 (COVID-19) ensued in 2020. All over the world, human activities were affected, and education sector was not left out. Almost all the education activities were paralyzed where students and teachers cannot dare to go to schools due to restriction of movement and other health precaution measures. COVID-19 was first discovered in China in December 2019 as an epidemic disease, but was later referred to as pandemic when the outbreak spread all the nations in the world (Parvinet al., 2020).

Pandemic refers to an epidemic that has spread over several countries or continents, usually affecting a large number of people (CDC, 2021). A pandemic is a disease outbreak that spreads across countries or continents. It affects more people and takes more lives than an epidemic (Robinson, 2020). The World Health Organization (WHO) declared COVID-19 to be a pandemic when it became clear that the illness was severe and that it was spreading quickly over a wide area. COVID-19 is the disease caused by a new coronavirus called SASS-CoV-2 (WHO, 2021). It was first learned by WHO on December 31, 2019, following a report of a cluster of cases of viral pneumonia in Wuhan, China. With the spread of the COVID-19 outbreak and the increased mortality around the world, many countries decided to close schools, colleges, and universities (Tsegay et al., 2022). The world over, there is one common drift in the education system that is "emergency e-learning" which means an expeditious transition to online education owing to COVID-19 as a highly infectious virus (Murphy, 2020). The Covid-19 pandemic has created challenges and caused disruption across the education sectors where school campuses closed, and face-to-face teaching and assessment shifted to an online format. With this, technology has made it possible for education to continue during COVID-19.

The advances in technologies are continuing to change the mentality of education in terms of both teaching/learning and institutional activities. Technology has always been at the forefront of human education, and this can be traced to the era of carving figures on rock walls till today. This unprecedented event has changed the world and has brought it into a new era which is known to be the time of on-line learning or e-learning. This function of technology has alleviated what might have resulted in education collapse during COVID-19. Technology in education provides a plethora tools that teachers can use in and out of the classroom to facilitate and enhance student learning. The education response during the early phase of COVID-19 focused on implementing remote learning modalities as an emergency response (World Bank Group, 2022).

Emergency remote teaching (ERT) is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances (Hodges et al., 2020). This teaching approach is to provide temporary access to instruction in a manner that there will be no bridge of teaching-learning process in educational system at crisis period like COVID-19. When a crisis occurs, it necessitates schools to shut down, emergency remote learning may be in the form of online lessons, radio, or blended learning solutions (UoPeople, 2022). Murphy (2020) expressed an idea that that emergency e-learning means an expeditious transition to online education. The use of online learning was not alien to the developed countries, nevertheless, the COVID-19 pandemic exposed other countries to the use of digital education for innovative teaching and as an alternative to enhance educational system. Online learning is a teaching-learning process that takes place over the internet. It is also referred to as internet-based learning environment that can connect students of diverse backgrounds who boast of different perspectives (Glossary, 2022). This is a method of instruction whereby students learn in a fully virtual environment. It was first introduced in the 1990s with the creation of the internet and utilized in distance learning. Online learning is also called e-learning. It enables students from different geographical areas to engage with an academic institution and other students online and learn flexibly, at their own pace, while working towards a degree or certificate (Glossary, 2022).

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During the COVID-19 pandemic, many institutions at all levels of education had to suddenly switch from classroom teaching mode to online teaching mode, in order to maintain continuous and effective delivery of instructional process. Teaching online, whether in a hybrid course or a wholly online course, requires different techniques and different tools. Education institutions at this period utilized different online learning platforms to communicate to students. Such platforms include WhatsApp, Zoom, Google classroom, computers video-conferencing, education radio program, television, social media, YouTube, and learning management system (Moodle, Schoology, Google Classroom, Canvas, Edmodo, etc.). Online digital platforms were for students' assignments, assessment and home-school communication (Hodges *et al.*, 2020). Some of these applications were adopted to send messages and disseminate instruction to the students in order to enable learning to continue. Including government at all levels and private organizations embraced and accepted the fact that only the e-learning approach can be introduced as emergency or an alternative learning strategy.

Oyo State Government in Nigeria has 630 secondary schools across the state. The government applied some strategies that saw the students continue their learning during COVID-19. In their approach to the situation, state government adopted online teaching involving learning through the television, sending messages via WhatsApp, learning on-air through the radio, while some private schools mostly utilized Zoom application and Google classroom. This action of the Oyo State Government utilizing online learning helped the state to maintain academic structure, which subsequently contributed positively to students' achievement in their external examinations.

The benefits of online learning as identified by e-learning industry (2022) include efficient ways to deliver lessons to students; it allows students to attend classes from any location of their choice; all the course or study materials are available online, thus creating a paperless learning environment which is more affordable; besides, the online learning system, with its range of options and resources, can be personalized in many ways to create a perfect learning environment suited to the needs of each student. Kamal and Illiyan (2021) opined that in virtual classes time and space are flexible because it has appeared as a convenient option as it is cost-effective, traveling time can be saved and there is no geographical space barrier. However, Pokhrel and Chhetri (2021) asserted that online teaching and learning has various limitations that slow down its adoption into educational system, these include the weakness of online teaching infrastructure, the limited exposure of teachers to online teaching, the information gap, non-conducive environment for learning at home, equity, and academic excellence in terms of higher education. In addition, Sumanth (2021) opined that in India during the shift toward online learning, teachers found it difficult to keep track of students' moods and their phone activities simultaneous with their engagement in studies in online classes. Furthermore, the majority of the instructors lacked the necessary skills to teach and organize exams online, and they confronted obstacles like the lack of basic infrastructure at home, technological problems, etc. Still they continued to teach virtually as they had no other option as a result of the nationwide lockdown (Kamal & Illiyan, 2021).

The sustainability of online learning after COVID-19 pandemic, teachers' perceptions and challenges required to be considered as long as online learning has come to stay and accepted globally as a means of transforming education pedagogically. Perception is the act or faculty of perceiving or apprehending by means of the senses or of the mind; cognition; understanding (Dictionary.com, 2022). The main task of human perception is to amplify and strengthen sensory inputs to be able to perceive, orientate and act very quickly, specifically and efficiently (Carbon, 2014). Teacher perception towards teaching and learning, particularly, educational media has become a popular measure of the quality of education in the institutions and the policies formation for the system to strive. To determine how useful and easy it is for teachers to use educational media, the perceived usefulness and ease of use are important.

Perceived usefulness is regarded as the extent to which individuals believe how technology would be useful to enhance job performance. It is also referred to as an individual belief that technology will make their work better (Usoro *et al.*, 2014). Olasedidun (2014) described perceived usefulness as the degree to which a college of education lecturer believes that using social media would enhance his or her job performance. Similarly, perceived ease of use is regarded as the degree to which individuals perceive how easy it is to use the technology (Davis *et al.*, 1989). The new ideas, innovations and technologies that are easier to understand are adopted more rapidly than those that require adopters to develop new skills and understandings (Robinson, 2020).

## 2. Statement of the problem

In the middle of the year 2021, Covid-19 pandemic seemed to be reduced and Nigerian government rolled out the precautions and medical measures for all the agencies to adhere to before any sector could be opened. Since, normalcy has returned to educational sector, e-learning activities have been dropped and abandoned, the schools have also returned to traditional way of teaching. It is evident that most schools and teachers do not have prerequisite knowledge about e-learning and not aware of its potential to support their teaching activities and where it can be effectively applied to enhance instructional delivery in their schools. However, in Oyo state, much has not been done to find out why e-learning activities disappeared after COVID-19 pandemic era, why teachers are no more interested in teaching with e-learning platforms, and what the perception of teachers towards e-learning usage for teaching and learning is. Thus, it is appropriate that e-learning cannot be effective without finding out the perception level (positive or negative) along with the challenges encountered by teachers toward the utilization of e-learning for instructional delivery. Therefore, this study aimed at finding out teachers' perceived usefulness, ease of use and challenges of e-learning for sustainable utilization after the COVID-19 pandemic in Oyo state, Nigeria.



### 3. Objectives of the study

The objectives of this study were to determine the

1. Teachers’ perceived usefulness of e-learning utilization’s sustainability after the COVID-19 pandemic in Oyo state.
2. Teachers’ perceived ease of use of e-learning utilization’s sustainability after the COVID-19 pandemic in Oyo state.
3. Perceived challenges encountered while using e-learning for instruction in Oyo state secondary schools

### 4. Research questions

This study aimed at providing relevant answers to the following research questions.

1. To what extent is the perception of teachers on usefulness of e-learning utilization’s sustainability positive after the COVID-19 pandemic in Oyo state?
2. To what extent is the perception of teachers on ease of use of e-learning utilization’s sustainability positive after the COVID-19 pandemic in Oyo state?
3. What are the perceived challenges encountered while using e-learning for instruction in Oyo state?

### 5. Methodology

The study utilized a simple descriptive survey design for the collection of data and analysis of the collected information. The target population comprised all public secondary school teachers in Oyo state, Nigeria.

#### 5.1. Sample and sampling technique

There are 630 secondary schools in Oyo state, which spread across the three senatorial zones in the state. The state has Oyo North, Oyo Central, and Oyo South as senatorial districts. Out of 630 secondary schools in Oyo State, thirty schools were selected for this study. In each of senatorial district, five Local Government Areas were randomly selected, and two schools participated in each of the Local Government Areas selected for this study. The schools were purposively selected because these schools have facilities for online teaching such as computer room, television, internet set up apparatus and their teachers engaged in some activities related to online teaching during the COVID-19 pandemic. This explained that ten schools were used to represent each senatorial district. Therefore, from each school in a senatorial district, ten teachers participated as respondents. In all, thirty schools and three hundred teachers served as the sample for this study. Table 1 shows the gender distribution of the respondents.

**Table 1:** Percentage distribution of respondents by gender

Gender	No. of Respondents	%
Male	197	65.7
Female	103	34.3
Total	300	100.0

Table 1 shows that male formed the highest number of the respondents with 197 (65.7%) while that of female was 103 (34.3%).

#### 5.2. Instrumentation

The instrument used for data collection was a questionnaire developed by the researchers, while section C of the questionnaire was adopted from a research work on perception on ease-of-use of social media conducted by Olasedidun (2014). The questionnaire was tagged as questionnaire on teachers’ perceptions on sustainable utilization of e-learning after the COVID-19 pandemic (QTPSUeLC-19). The instrument had four sections (A, B, C and D). Section A contained information on respondents’ biodata, while section B had ten items on Teachers’ Perception of the usefulness of e-learning for sustainable utilization after COVID-19. Section C comprised items focused on teachers’ perception of the ease of use of e-learning for sustainable utilization after COVID-19 and Section D was developed on teachers’ perception on the challenges they encounter when using e-learning for instructional delivery. This study used Likert scale type to measure the respondents’ opinions on items developed in the questionnaire. To analyze the perception inventory, the responses for the positively worded items Section B (1, 2, 5, 7, 8, 9, 10, 13 and 14) and Section C (1, 4, 8, and 9) were recorded in a manner that ‘strongly agree’ was rated as 4, ‘agree’ as 3, ‘disagree’ as 2 and ‘strongly disagree’ as 1, while the scoring mode was reversed for negatively worded item (3, 4, 6, 11 and 12). This method ensured that higher scores on the perception inventory indicated higher positive perception towards the method of e-learning and this made the possible range of scores on the perception inventory to be 14 to 56.



The validity of the instrument was determined by five experts in educational technology (2), educational evaluation (1) and information and communications technology (2). Their observations and corrections were effectively conducted. Cronbach alpha was used to determine the reliability of the instrument and measure of 0.82 was obtained as reliability index.

### 5.3. Data collection procedure

The questionnaires were administered with help of research assistants in each of the selected schools. Thirty (30) research assistants participated in this study who helped in the administration of the questionnaires. It took researchers four weeks to collect the data. Out of 300 questionnaires sent out to schools 278 were retrieved.

The analysis of the collected data was done using descriptive statistics such as simple percentage, mean and standard deviation to answer the raised research questions.

### 5.4. Results

The research questions were answered, and analyses of the results are presented in the tables. To determine the perception level of the respondents, average mean score was calculated to be 2.5. Above or below the average mean score indicates the positive or negative perception level of the respondents.

#### Research question 1:

To what extent is the perception of teachers on the usefulness of e-learning for sustainable utilization positive after COVID-19?

**Table 2:** Teachers' perception of the usefulness of e-learning for sustainable utilization in secondary schools

S/N	Items	SA		A		D		SD		Mean Value	Std. D.
		No	%	No	%	No	%	No	%		
1	I prefer to teach in traditional way rather than through e-learning.	105	37.4	93	33.5	56	20.1	24	8.6	1.996	0.963
2	Teaching online during COVID-19 was tasking and a waste of time.	91	32.4	83	29.9	40	14.4	64	23.0	2.277	1.149
3	Using computer to teach in e-learning creates fear in me and I cannot most of the time finish the task.	40	14.4	68	24.5	86	30.5	84	30.2	2.769	1.036
4	I will rather teach in the classroom with the students physically than using e-learning because students' presence increases sharing of experiences with reality of life.	99	35.6	71	25.5	58	20.9	50	18.0	2.212	1.115
5	I often feel uncomfortable to teach my students in the use of e-learning because there are distractions during the teaching.	42	15.1	51	18.3	102	36.7	83	29.9	2.813	1.027
6	My students do not do their homework during COVID-19 because they know they cannot be scolded.	87	31.3	114	41.0	42	15.1	35	12.6	2.089	0.981
7	My students receive more information in e-learning than through the traditional way of learning, so, e-learning is better.	95	34.2	98	35.3	31	11.2	54	19.4	2.842	1.099
8	I feel teaching/learning is as efficient in class as at home on the e-learning	73	26.3	57	20.5	103	37.1	45	16.2	2.568	1.048
9	Students are more concentrated during e-learning than during the traditional way because impactful materials/ activities like videos, quizzes, images etc. are applied.	142	51.1	67	24.1	25	9.0	44	15.8	3.104	1.108
10	The interactions involved in the e-learning instruction make it superb over the traditional way of learning.	83	29.9	95	34.2	45	16.2	55	19.8	2.741	1.090
<b>Average Mean Score</b>				<b>=</b>		<b>2.541</b>					

Table 2 revealed that average mean score of teachers' perception on the usefulness of e-learning for sustainable utilization after COVID-19 was 2.541. The indication of this is that teachers' perception on continuation of using e-learning after Covid-19 is positive enough. This implies that teachers in secondary schools perceived e-learning as a useful way of teaching and learning. As for negative assessments, teachers disagreed that using computer to teach in e-learning approach creates fear in them (M=2.769), they agreed that e-learning is comfortable to use for teaching (M=2.813), there is enough information for students for their learning on e-learning platforms (M= 2.842), students have high concentration when studying with e-learning (M=3.104), and interactions involved in the e-learning instruction were



superb (M=2.741). However, teachers still preferred to teach in traditional way than using e-learning approach (M=1.996), they categorized online teaching as tasking and a waste of time (M=2.277), teachers in the classroom preferred to see the student physically in the classroom than virtually during e-learning (M=2.212) and students do not do their homework during COVID-19(M=2.089).

### Research question 2

To what extent is the perception of teachers on the ease-of-use of e-learning for sustainable utilization positive after COVID-19?

**Table 3:** Teachers' perception of the ease-of-use of e-learning for sustainable utilization in secondary schools

S/N	Items	SA		A		D		SD		Mean	Std.D.
		No.	%	No.	%	No.	%	No.	%		
1	I can use e-learning platform for teaching without written instructions.	92	33.1	102	36.7	54	19.4	30	10.8	2.921	0.977
2	I find the study schedule of the e-learning teaching very unfriendly	86	30.9	76	27.3	74	26.6	42	15.1	2.259	1.057
3	E-learning usage is always cumbersome.	97	34.9	95	34.2	49	17.6	37	13.3	2.094	1.026
4	It is easy to become skillful at using e-learning for teaching and learning.	117	42.1	83	29.9	48	17.3	30	10.8	3.032	1.014
5	E-learning utilization in teaching will be too complex for effective instructional process.	82	29.5	71	25.5	94	33.8	31	11.2	2.266	1.006
6	The use of e-learning will take more of my time than necessary, so its application at school is undesirable.	86	30.9	101	36.3	34	12.2	57	20.5	2.223	1.098
7	E-learning usage will increase my daily load which can be tantamount to stress in work.	38	13.7	59	21.2	76	27.3	105	37.8	2.892	1.063
8	Navigation on e-learning is easy to use for computer amateur.	85	30.6	104	37.4	38	13.4	51	18.3	2.802	1.068
9	It is easy to access different teaching and learning resources on e-learning platforms.	123	44.2	98	35.3	12	4.3	45	16.2	3.076	1.063
10	Accessing students' homework on e-learning is tiresome.	98	35.3	75	27.0	89	32.0	16	5.8	2.083	0.948
<b>Average Mean Score</b>				=		<b>2.565</b>					

The results in Table 3 showed the level of teachers' perception on the ease-of-use of e-learning for sustainable utilization after the COVID-19 era. The result indicated that the average mean score obtained was 2.565, which discloses a positive perception. The implication of this is that teachers were influenced by their perceived ease of use of e-learning for instructional delivery (M=2.921), they found e-learning a means for them to be skillful in using computer programs (M= 3.032). More so, using e-learning platforms for instruction does not increase teachers' daily load to cause stress in their work (M=2.892), navigation on e-learning was agreed to be easy to do and it is easy to access learning resources to teach the students on e-learning (M=2.802 and M=3.076, respectively). Nonetheless, mean scores for items 2 (2.259), 3 (2.094), 5 (2.266), 6 (2.223) and 10 (2.083) showed that teachers are uncomfortable with study scheduled with e-learning, found e-learning usage cumbersome, complex for effective instructional delivery and e-learning takes more of their time.

### Research question 3

What are the perceived challenges encounters when using e-learning for instructional delivery?

Table 4 revealed the results emanated from the respondents of this study on challenges encountered while using e-learning for instruction in covid-19 era.

**Table 4:** Perceived challenges encounters while using e-learning for instruction in covid-19 era

No	Items	SA		A		D		SD		Mean	Std.D.
		No.	%	No.	%	No.	%	No.	%		
1	There is irregular network service by the providers which most of time difficult to join my students in e-learning classes	181	65.1	43	15.5	29	10.4	25	9.0	1.633	0.991
2	There is epileptic power supply which hinder regular usage of e-learning	169	60.8	93	33.5	12	4.3	4	1.4	1.464	0.650
3	Data subscription is at high rate and teacher find it difficult to continuing using e-learning for instruction	154	55.4	56	20.1	37	13.3	23	11.2	1.802	1.048
4	Inadequate knowledge of computer affects my understanding and usage of e-learning as instructed	94	33.8	86	30.9	59	21.2	31	14.0	2.155	1.044
5	Students failed to do their homework since it is e-learning, no bully by the teacher	73	26.3	99	35.6	31	14.7	67	23.4	2.353	1.107
6	Lack of personal computers among the teachers may affect their participation in e-learning teaching	158	56.8	82	29.5	13	4.7	17	9.0	1.658	0.928
7	No adequate training on e-learning before introducing it during Covid-19	121	43.5	93	33.5	41	14.7	23	8.3	1.878	0.949
8	Lack of monitoring of students' works when using e-learning may affect their performance	53	19.1	72	25.9	94	33.8	59	21.2	2.572	1.027
9	There is no basis of using the e-learning in the curriculum as teaching and learning approach make it optional	163	58.6	95	34.2	10	3.6	10	3.6	1.522	0.734
10	Most students have never used computer or smart phone before, so, it affects their participation	103	37.1	63	21.6	36	14.0	76	27.3	2.317	1.229
<b>Average Mean Score</b>				<b>=</b>		<b>1.935</b>					

In Table 4, the respondents affirmed with all the items perceived to be encountered while using e-learning in covid-19 era. All the items were signified to be problematic. The perceived challenges include irregular network service by the providers (1.633), inadequate knowledge of computer skill (2.155), often failure of students to do homework (2.353), lack of personal computers among the teachers (1.658), no direct training for teachers on e-learning usage (1.878), no basis for using e-learning in the curriculum (1.522) and most students have never use computer or smart phones for learning (2.317). However, teachers perceived that e-learning gives room for effective monitoring of students' work and does not constitute to challenges facing teachers' usage of e-learning as the mean score obtained was 2.572.

## 5.5. Discussion

The study found that teachers in secondary schools perceived e-learning useful as a way of teaching and learning. Using computer for e-learning does not create any fear. E-learning is comfortable to use for teaching and there is enough information for students for their learning on e-learning platforms. Students have high concentration when leaning with e-learning and interactions involve in e-learning instruction was superb. This positive perception of teachers affirmed the earlier studies carried out towards perception of teachers on usefulness of web-based learning for instructional delivery. Olasedidun (2014) submitted that perception of college teacher towards social media for instruction was positive because it enhances teachers' effectiveness in the teaching job, making their lessons more diverse, and increasing their daily productivity among others. In addition, Kazoka and Mwantimwa (2019) in their result agreed with fact that e-learning tools provide multiple opportunities to students to engage in active and self-directed learning. Apart from that, the findings of George and Ogunniyi (2016) revealed that teachers were influenced by their perceived usefulness of information and communication technology-based learning and affirmed that their teaching skills would be improved with ICT.

This study found out that that teachers' perception on ease of use of e-learning for sustainable utilization in secondary schools after COVID-19 was positive and high. The result revealed that teachers' perceived e-learning very easy to use for instructional delivery, the navigation on e-learning platform was agreed to be easy to do and it is easy to access learning resources to teach the students. This finding is in line with the work of Olasedidun (2014) who revealed that college lecturers' perceived ease of use of social media in instruction, the respondents' perception was positive. It was revealed that there will not be much difficulty in making use of social media in instruction. Kazoka and Mwantimwa (2019) submitted that faculty members and postgraduate students agreed that ease of use of Web-based technologies predicts their usage and informed that Web 2.0 technologies are easier to integrate into teaching/learning so as to make access learning resources easier.



It was revealed in the findings that adoption of online learning has some limitations and challenges like irregular network service, inadequate knowledge of computer, failure of students to do homework, lack of personal computer to work, no direct training for teachers on e-learning usage and no curriculum basis of using e-learning for instruction in secondary schools. These results corroborated the works of Tsegay, Ashraf, Perveen, and Zegergish (2022). They reported that many of the challenges identified by the participants were to lack uninterrupted electricity, lack of uninterrupted Internet, lack of teacher's ICT skills and physical or emotional interaction. In addition, Karmal & Illiyan (2021) found in their report that majority of the teachers faced difficulty in the online evaluation due to connectivity issues. Teachers were unaware of virtual learning, lacked necessary equipment and training, and lacked basic facilities like a printer, whiteboard, marker and many others.

## 6. Conclusion and recommendations

The purpose of this study was to determine the perception of teachers towards the usefulness, ease of use and challenges of e-learning for sustainable utilization in secondary schools after COVID-19 pandemic in Oyo State, Nigeria. In the study result revealed that teachers had positive perception towards the usefulness and ease of use of e-learning for instructional delivery. The findings established that teachers perceived e-learning as an effective way of disseminating instruction. Also, agreed that e-learning has robust information for student to be independent in their studies. It was showed that when students utilize e-learning, they have high concentration on their studies. E-learning was perceived by the teachers to be easy to use because navigation process was easy to use and the learning resources on the e-learning platforms are accessible to use.

This study sought the various challenges encountered by the teachers while using e-learning to teach. The result revealed teachers identified irregular network service, inadequate knowledge of computer, failure of students to do homework, lack of personal computer to work, lack of direct training for teachers on e-learning usage and no curriculum basis of using e-learning for instruction in secondary schools. Despite these challenges, e-learning have proven to be effective and alternative means to transform the conventional teaching method to an interactive and student-centered that can be used at any emergency situation.

Based on the findings of this study, it is recommended that:

1. Teachers should be motivated by the school owners to further enhance their participation in the utilization of e-learning in teaching and learning
2. Stakeholders in education should endeavor to invest in capacity building by providing continuous training to teachers for improving their online teaching skills and competency.
3. Government and private school owners should provide adequate facilities/equipment for teachers to effectively use e-learning for instructions.
4. Government should endeavor to further enhance the quality of e-learning through curriculum development that can accommodate its adoption into the system of education

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