Assessing prospect and challenges of e-learning in teacher education program aftermath of covid-19 pandemic: teacher educators' views

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Abstract

The study aims at assessing teacher educators' views on the prospect and challenges of e-learning in teacher education program aftermath of the Covid-19 pandemic. The population consists of 1321 academic staff of Alvan Ikoku College of Education Owerri (AIFCE). Two Schools out of the seven schools in Alvan Ikoku Federal College of Education were purposively selected for the sample size of 249 academic staff. Researchers made an assessments questionnaire titled" Teachers Views on Prospect and Challenges E-learning in Teacher Education Program Questionnaire (TVPCETEC) was used for data collection. It has a reliability coefficient of 0.77 determined through the Pearson Product Moment Correlation Coefficient. The data collected were analyzed using mean and standard deviation in answering the research questions. The study showed that teacher educators are of the view that e-learning is the key for effective teacher education program vis-vis the Covid-19 pandemic, which has called for social distance protective protocols. Challenges to effective e-learning, such as in teacher education, were also identified. But despite the challenges facing e-learning in teacher education programs, teacher educators accepted that e-learning is the key to limitless possibilities in education and should be fully embraced. It is recommended that Colleges of Education liaise with relevant authorities in benchmarking teacher education programs with e-learning. It will help tackle the digital divide among lectures and students for effective implementation of learning in teacher education programs.

Keywords:
e-Learning; teacher education program; Covid-19 pandemic.

1 INTRODUCTION

The recent disruption of education and prolonged closure of schools in different parts of the world caused by the Covid-19 pandemic has made different countries think of alternative ways of providing education. This is to ensure the continuation of learning. In order to keep education afloat and move, most countries adopted online distance education using different online platforms. This resulted in the adoption of e-learning and ICTs into the education program of some countries. Because of spontaneous nature and the speed at which Covid-19 infection spread. The adoption of e-learning in most countries' education was unplanned, bringing new sudden changes in education. This opened a new window of opportunities that come with attendant challenges.

E-learning refers to a learning system that is conducted via electronic media. It could also be described as virtual or online learning. It includes sharing reading materials, documents, presentations, or webinars through the internet. Information communication technology has become an important part of modern education, and there is a huge involvement of ICT in the modern teaching-learning process (Anderson, 2005; Chandra, 2021). Educators can share study materials and lectures in the form of Portable document format (PDF) or Word documents by uploading them on their respective institution webpages, WhatsApp, and e-mails to maximum students during the lockdown and aftermath of the Covid-19 pandemic. According to Felix (2020), lectures can also be delivered through WeChat, sharing audio-visual videos e-mails, and different online teaching apps like Zoom, Google classroom Superstar, g-suite cloud meeting and so on. The improvement in technologies has offered a promising purview for teaching-learning processes. It offers teachers the opportunities to adapt different pedagogical approaches. It enhances the teaching and learning procedures through varied adaptable modes of materials presentation (Thamarana, 2016). The teachers can motivate students to enhance their learning skills through different innovative modes available on e-learning, despite the huge positive impact that e-learning has brought into education, resulting in education change. It is not without its attendant challenges on parents, students, and teachers. But this study will be restricted to teacher educators' views on the challenges and prospect of e-learning on teacher education programs after the Covid-19 pandemic.

Change involves creating something unusual to overcome peculiar challenges that the previous status quo could not solve. It includes something efficacious dissimilar from the norms but has more efficacious results (Adeyi & Olaleye, 2017). Changes in education, whether necessitated as a result of preventive measures against the spread of a pandemic like Covid-19 or implemented as part of reforms within the education system, are interfaced with other factors that can make or mar the objectives of the educational change. The concerned stakeholders may not easily accept the need for educational change, which may encounter resistance. This will bring about the low achievement of the objectives. Studies have indicated that the highest opposition to change in education occurs within groups that lack interest in the change. They may be unwilling to work cooperatively for the success of the educational change. This is to maintain the status quo (Ajadi *et al.,* 2013; Andrew-Essien 2021).

Teachers are of cardinal importance in education change because they are the direct implementers of education. Iwuamadi *et al*. (2020) pointed out several factors that can encourage or discourage teachers from adapting to education changes. These include security, economic conditions, authority, status, responsibility, working conditions, level of self-

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satisfaction, or the time needed to implement the change. Other studies associate factors that influence teachers' resistance to change with psychological, personal, and school-related, and organizational factors (Nwanna, 2018).

Psychological factors that can affect teachers' ability to be part of the educational change include teachers' discomfort, feeling of loss, doubt, and worry as a result of leaving the usual environmental comfort zone (what they know and what makes them feel comfortable) and moving towards something unusual and uncomfortable (Adeyi & Olaleye, 2017). Other group factors that have been found to influence teachers' resistance to change arestress, accumulated fatigue, and mental exhaustion. In addition to making teachers resistant to change, it can also negatively affect their performance and level of satisfaction (Margolis & Nagal 2006). Furthermore, Basilia and Kvavadze (2020) indicated that major challenges teachers have in conducting online learning include lack of knowledge and skills in using technology, inaccessibility of technology, and at-home isolation. Such challenges have been reported in countries with extremely low-level use of classroom technology prior to the current circumstances that Nigeria is among (United Nations, Education, Scientific and Cultural Organization, UNESCO, 2020). In addition, requests for shifting teaching to an online format have also been reported to increase the level of stress and anxiety among teachers in different parts of the world (Hamzah et al., 2020; UNESCO, 2020). On these premises, the researchers investigate the teacher educators' views on prospects and challenges of e-learning in teacher education programs aftermath of Covid-19 pandemic.

Researchers have indicated a positive impact of technology in education and its ability to assist in various educational processes (Asogwa, 2011; Ilechukwu, 2013; Owusu-Fordjour & Koomson, 2020). Okiki (2011) asserted that technology could assist in various educational processes. It increases positive impact on student learning support and helps teachers in professional advancement and development. The positive effects of technology in education have made the integration of technology in the classroom widely promoted and supported worldwide. Learning has grown more open, and teaching approaches have become more flexible due to the advancement of information and communication technology (ICT) and its application in learning processes. This makes students be autonomous, independent, and self-determined learners. This helps them handle their learning (Ugwu & Oben 2010; Owusu-Fordjor & Koomson, 2020). It also assists students in developing self-regulating abilities concerning goal planning, self-monitoring, and adaptability to novel situations. These opportunities also allow teachers to promote active learning to make learning more engaging and successful (Ilechukwu, 2013; Essoh et al., 2014). This makes teachers be facilitators of the learning process (Abidoye, 2010). It also exempts teachers from teaching alone by giving students responsibility as well (Azeez, 2010). In addition, with the development of technology, the student-centered approach is considered the main component of flexible learning, as it empowers students and teachers to share information. The prospect of e-learning in education cannot be easily exhausted, but the fact is that it keeps on increasing with diversity and evolving new possibilities. On this note, the researchers investigate teacher educators' view on the prospect and challenges of e-learning in teacher education programs aftermath of Covid-19 pandemic. A challenge is defined as any situation that makes it problematic to advance or achieve an objective (Izuagba & Eke, 2013). The following are some of the main challenges regarding the use of e-learning in teacher education program.

1.1 Limited Accessibility and Poor Network Connection
Several research studies indicate that lack of access to resources is one of the complex challenges that hinder teachers from using e-learning in education Felix, 2020). According to Becta (2004), the inaccessibility of ICT resources may not be the only reason, non-availability of the hardware and software or other ICT materials within the school. Other reasons may include poor resource organization, poor quality hardware, inappropriate software, or lack of personal access for teachers. Pelgrum (2001) indicated the following as the barriers to ICT integration in the classroom: insufficient computer peripherals, insufficient numbers of copies of the software, and insufficient immediate Internet access.

1.2 School with Limited Technical Support
Without good technical support in the classroom and appropriate ICTs resources, teachers cannot effectively use ICT in lesson delivery (Andrew, 2014; Andrew et al., 2015). This may be one of the factors that hinder teachers from using ICT in lesson delivery. Pelgrum (2001) observes that one of the main obstacles to ICT use in education is the lack of technical assistance, which makes a technical obstacle to e-learning left unattended. These technical obstacles include slow connection to websites, Internet connections failures, malfunctioning of printers and computers, and lack of high-speed computers for teachers. Technical barriers hindered the smooth lesson delivery or the natural flow of the classroom instructional activity (Sicilia, 2005). Becta (2004) observed that lack of technical support in schools means that technical maintenance is not likely to be carried out regularly, resulting in a technical breakdown. ICT integration in teaching needs a technician backup, and lack of such can be a barrier to effective e-learning in teaching and learning.

1.3 Lack of Effective Training
According to Becta (2004), training is complex because there are factors to be considered to ensure effective training. They include time for training, pedagogical training, skills training, and the use of ICT in initial teacher training. In a similar vein, Gomes (2005) research indicates that lack of training in digital literacy, lack of pedagogic and didactic training on how to use ICT in the classroom, and lack of training regarding technology use in specific subject areas were obstacles to using e-learning in classroom practice. Basilaia and Kvavadze, (2020) argued that if teachers are to be convinced of the value of using ICT in their teaching, their training should focus on the ICT pedagogical issues. Basilaia and Kvavadze (2020) observe that teachers did not know how to use ICT in their classrooms despite attending professional development courses in the subject; instead, they just knew how to operate a computer and set up a printer. This is because the courses solely focused on instructors learning fundamental ICT skills and did not typically teach teachers how to

develop the educational components of ICT, according to them. They assert that training programs do not focus on teachers' pedagogical practices in relation to ICT but on developing ICT skills. Teachers must gain abilities in incorporating computer use into their teaching/learning programs and being computer literate.

1.4 Limited Time
Researchers identified time constraints and the difficulty in organizing enough computer time for lessons as barriers to teachers' use of ICT in their classrooms (Becta, 2004; Sicilia, 2005). According to Sicilia (2005), the most common problem teachers mentioned was a lack of time to design technology classes, examine other Internet sites, or investigate different features of educational software. Others include the time spent looking for Internet assistance, preparing classes, exploring and practicing with technology, dealing with technological issues, and receiving proper training.

1.5 Lack of teachers' competency
Teachers' skill in incorporating ICT into pedagogical practice is another difficulty directly related to teacher confidence (Becta, 2004). According to studies, teachers' lack of technical knowledge is a major impediment to their acceptance and implementation of ICT (Abidoye et al., 2011; Owusu-Fordjour & Koomson, 2020). Many teachers lacked the expertise and abilities to handle computers, according to Iluchukwu (2013), and were unenthusiastic about the changes and integration of supplementary learning that came with incorporating computers into their teaching practices. According to recent studies, the severity of this obstacle varies by country. According to a study, teachers' lack of technical proficiency is a major barrier to their acceptance and implementation of ICT in developing nations (Pelgrum, 2001). According to Abidoye et al. (2011), many teachers still refuse to use ICT and media in the classroom due to a lack of ICT skills rather than for pedagogical or didactic reasons. As a result, one of the major roadblocks to integrating technology into education may be a lack of teacher competency. It could also be one of the elements contributing to change aversion. On this note, the researchers look at the perspectives of teacher educators on the potential and challenges of e-learning in teacher education programs in the aftermath of the Covid-19 outbreak. The purpose of this study was to investigate teacher educators' views on the prospect and challenges of e-learning in teacher education program aftermath of the Covid-19 pandemic.

The research questions that guide the study are:
- What are the teacher educators' views on the prospect of e- learning in teacher education programme aftermath of Covid-19 pandemic?
- What are the teacher educators' views on the challenges of e- learning in teacher education programme aftermath of Covid-19 pandemic?
- What are the teacher educators' views on embracing e- learning in teacher education programme aftermath of Covid-19 pandemic?

2 METHOD
A survey design was used for the study. This design seeks information from respondents as the situation exists without manipulating any variables. The study was carried out in Alvan Ikoku Federal College of Education Owerri. The population consist of 1321 academic staff of Alvan Ikoku Federal College of Education Owerri (AIFCE). Two Schools out of the seven schools in Alvan Ikoku Federal College of Education were purposively selected and the sample size consisting of 249 academic staff. They are School of General Education162 (51males and 111 females) and School of General Studies 87 staff (39 males and 48 females). An instrument for data collection was the Teachers Views on Prospect and Challenges E-learning in Teacher Education Program Questionnaire (TVPCETEQ). The instrument has four partis. Part one sought demographic information of the respondent. In contrast, part two sought information on teachers' educators' view on the prospect of e-learning in teacher education aftermath of Covid-19 pandemic. Part three sought information on teacher educators' views on challenges of e-learning in teacher education program aftermath of Covid-19 pandemic. Finally, part four sought information on teacher educators' views on embracing the use of e-learning in the aftermath of the Covid-19 pandemic. A four point "Likert" rating scale of strongly agree (SA), Agree (A), strongly disagree (SD) and Disagree (D) was used. The instrument was face validated by three experts in the Department of Computer Science education and Psychology/Measurement and Evaluation in Alvan Ikoku College of Education. Their contributions gave rise to the final instrument used for the study. The instrument was subjected to a reliability test using thirty-six lecturers outside the study population through the test-retest method. The results were subjected to reliability co-efficient using Pearson Product Moment Correlation Coefficient, which yielded a highly positive correlation of 0.77. The instrument was administered to the respondents with the help of two research assistants, which ensured 100% return. Data were analyzed using mean and standard deviation to answer the research questions. The decision rule was that any mean score of 2.50 and above was accepted; otherwise, it was rejected.

3 RESULTS
Data generated from the survey questionnaire were analyzed and presented below.

3.1 Research Question One (RQ 1)
What are the teacher educators' views on the prospect of e-learning in teacher education program aftermath of the Covid-19 pandemic?

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Table 1. Mean and Standard deviation on views of teachers' educators on the prospect of e-learning in teacher education program aftermath of covid-19 pandemic

S/N	ITEM STATEMENT	Male Teacher			Female Teacher		
		X	SD	REM	X	SD	REM
1	E-learning facilities effective pedagogy that enhance learning	3.41	0.80	Accept	3.38	0.68	Accept
2	E-learning resources make it possible for different kinds of learning styles that capture various learning needs of learners	3.72	0.81	Accept	3.64	0.6	Accept
3	E-learning makes distance more effective.	3.5.8	0.49	Accept	3.61	0.71	Accept
4	E-learning facilitate education Innovation	3.39	0.52	Accept	3.51	0.62	Accept
5	E-learning facilitate pedagogical and curriculum content digital development	3. 41	0.51	Accept	3.69	0.74	Accept
6	E-learning facilitates in designing flexible education program that captures the needs of various learners	3.05	0.49	Accept	3.18	0.51	Accept
7	E-learning compels both teachers and learners to be ICT compliance	3.8 3	0.50	Accept	3.64	0.7	Accept
8	E-learning strengthens the ICT skills of both teachers and learners.	3.22.	0.51	Accept	3.55	0.51	Accept
9	E-learning facilities teachers and learners problem-solving skills	3.90	0.72	Accept	3.80	0.69	Accept
10	E-learning enhances the critical thinking of both the teacher and learners	3.21	0.61	Accept	3.60	0.56	Accept
	Cluster mean	34.72	6.46		35.53	6.14	
	Average mean response	3.51					

Table1 shows that all the items on the questionnaire were accepted as they had a response mean greater than the instrument scale mean (2.50). Also, the average mean (3.51) is greater than the scale mean. This implies that teacher educator views are that e-learning has very good prospect in teacher education program in respect to a covid-19 pandemic that has made e-learning a high demand in education This asserts that teacher educators have a positive view that e-learning in education will help advance the prospect of application of it in education and also help to keep teaching and learning moving irrespective of the Covid-19 pandemic challenge

3.2 Research Question Two (RQ 2)

What are the teacher educators' views on the challenges of e-learning in teacher education program aftermath of Covid-19 pandemic?

Table 2. Mean and Standard deviation on views of teacher's educators on challenges of e-learning in teacher Education program aftermath of covid-19 Pandemic

S/N	ITEM STATEMENT	Male Teacher			Female Teacher		
		X	SD	REM	X	SD	REM
1	Insufficient technical support for teachers	2.21	0.30	Reject	2.35	0.36	Reject
2	Insufficient number of interactive whiteboards	3.84	0.75	Accept	3.14	0.41	Accept
3	Irregular power supply	3.48	0.57	Accept	3.55	0.51	Accept
4	Insufficient number of laptops/notebooks	3. 70	0.51	Accept	3.87	0.74	Accept
5	Lack of pedagogical models on how to use ICT for learning	2.45	0.39	Reject	2.4 8	0.43	Reject
6	School space organization (classroom size and furniture etc.)	3.78	0.81	Accept	3.69	0.73	Accept
7	Insufficient bandwidth or Speed	4.01	0.95	Accept	3.94	0.83	Accept
8	Non-availability of the required software	2.41	0.30	Reject	2.46	0.44	Reject
9	Virus threat	4.30	0.99	Accept	4.42	0.98	Accept
	Cluster mean	30.18	5.60		29.49	5.43	
	Average mean response	3.15					

Table 2 shows that majority of the items on the questionnaire were accepted as they had a response mean greater than the instrument scale mean (2.50). Also, the average mean (3.15) is greater than the scale mean. This implies that teacher educators are of the view that are many obvious challenges that confront them as they use e-learning in their lesson delivery. Some of those challenges include the lack of interactive boards in lecture halls and irregular power supply. Virus treat and so on. They equally agreed that there are challenges that are no longer a challenge to them, including lack of technical support, lack of software, and so on. This proves that the former no longer challenge them maybe the institution has made adequate provision in that area.

3.3 Research question 3

What are the teacher educators' views on embracing e- learning in teacher education program aftermath of Covid-19 pandemic?

Table 3: Mean and Standard deviation on views of teachers' educators on embracing e-learning in teacher education program aftermath of covid-19 pandemic

S/N	ITEM STATEMENT	Male Teacher			Female Teacher		
		X	SD	REM	X	SD	REM
1	E-learning assures academic schedule flexibility	3.65	0.57	Accept	3.71	0.72	Accept
2	E-learning improves learning outcome	3.71	0.54	Accept	3.51	0.71	Accept
3	With e-learning makes course information to be well-structured and available to students.	3.58	0.71	Accept	3.55	0.61	Accept
4	With e-learning, academic activities are easily aligned with course activities	3.67	0.69	Accept	3.58	0.63	Accept
5	I can teach my causes successful using e-learning facilities	3.00	0.69	Accept	2.68	0.53	Accept
6	With e-learning, I am confident that I can teach effectively using different modes of e-learning skills.	2.51	0.40	Accept	2.59	0.82	Accept
7	I feel confident using e-learning course-management tools (e.g., Blackboard, WebCT)	2.84	0.51	Accept	2.63	0.39	Accept
8	I am confident that I can adapt my lesson plan with e-learning.	2.73	0.40	Accept	2.81	0.49	Accept
9	I believe that e-learning is an effective medium for teaching and learning	3.50	0.68	Accept	3.58	0.64	Accept
	Cluster mean	29.19	5.19		25.82	5.56	
	Average mean response	3.05					

Table 3 shows that majority of the items on the questionnaire were accepted as they had a response mean greater than the instrument scale mean (2.50). Also, the average mean (3. 05) is greater than the scale mean. This implies that teacher educators in Alvan Ikoku Federal College of Education, Owerri, have whole-heartedly embrace/accept e-learning as an alternative to conventional face-to-face class interaction. This may be because of the effect of Covid-19 pandemic and the need to observe protective protocol.

4 DISCUSSION

The result of the present study revealed teacher educators' views on the challenge and prospect of e-learning in teacher education program aftermath of covid-19 pandemic. Both male and female teacher educators believe that e-learning has a high prospect in making teacher education program adopt functionally remote learning/ distance learning, which will help sustain the Covid -19 protective protocol without interrupting the academic program. This is because e-learning facilitates collaborative learning between teachers and students irrespective of time, space, and distance. This is in line with the assertion of (Ilechukwu, 2013; Owusu-Fordjour &Koomson, 2020) that e-learning will help to encourage self-regulated learning among learners, distracted face-to-face contact among learners but at the same time encourages collaborative learning among them through diverse ICTs platforms. It also encourages intellectual discourse and peers support among learners.

On the challenges e-learning in teacher education faces, both male and female respondents agreed that the following are some of the major challenges: an insufficient number of interactive whiteboards, irregular power supply, lack of pedagogical models on ICT use for learning, school space organization and so on. We can categorize these challenges to be mainly a lack of ICT-related resources. This observation is in line with Pelgrum (2001) assertion that lack or insufficient ICT-related resources in schools are among the bane to functional and effective integration of e-learning education programs in schools. On embracing e-learning in teacher education programs, male and female educators agreed that technological advancement in education had revolutionized teaching/ learning and education. Thus, e-learning in teacher education programs is no longer an option, and teachers must leverage their access to become proficient with the latest educational, technological tools.

5 CONCLUSION

The study was carried out to determine teacher educators' views on prospects and challenges of e-learning in teacher education programs aftermath of the Covid-19 pandemics. Research evidence has shown that teacher educators believe that e-learning is the key for an effective teacher education program vis-vis the Covid-19 pandemic, which has called for social distance protective protocols. This is based on the evidence that with e-learning, face-to-face contacts will be highly reduced among teachers and students. Also, the possibilities which e-learning resources can offer to education are unlimited. Challenges to effective e-learning in teacher education were also identified. However, despite the challenges facing e-learning in teacher education programs, teacher educators accepted that e-learning is the key to limitless possibilities in education and should be fully embraced.

6 RECOMMENDATION

- Colleges of Education should explore new methods to train and prepare lecturers so they may acquire the relevant ICT skills and competencies to be compliant with teacher education e-learning delivery.
- Colleges of Education should liaise with relevant authorities in benchmarking teacher education programs with e-learning. It will help to tackle the digital divide among lecturers and students.

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- Government should adequately equip Colleges of Education with adequate and appropriate ICTs resources. This will help to advance e-learning in a teacher education program.

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