

# Assessment of Training Needs of Facilitators in Open and Distance Learning in Tertiary Institutions in Rivers State

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**Abstract:** This paper examine Assessment of Training needs of facilitators in Open and Distance learning in tertiary institutions in Rivers State. Three objective and research questions and hypotheses were posed to guide the study. The population of this study was 311 facilitators from Faculty of Education in Rivers State University, University of Port Harcourt and Ignatius Ajuru University of Education. The entire population was used as sample size drawn from the institutions under study. The sampling technique used for this study was census sampling techniques as all the respondents were given equal opportunity. Data for the study were collected by means of questionnaire titled "Assessment of Training needs of facilitators (ATNFQ)". The instrument adopted a modified four point Likert scale of Strongly Agreed to Strongly Disagree. The face and content validity of the instrument were determined by two other experts in educational management and one measurement and evaluation in Rivers State University, Port Harcourt. Test-re-test method was used for the reliability test which yielded reliability co-efficient of 0.83 and 0.85. Three Hundred and Eleven (311) copies of questionnaire were distributed, and 283 were retrieved for analysis. Mean and Standard Deviation were used to answer the research questions, while z-test was used to test the hypotheses. Findings from the study revealed that facilitators needs training as regards live streaming, test construction and software packages. Based on the findings and conclusions made, the researchers recommends the following, Facilitators should be trained periodically on live streaming technologies, Experts in psychometrics should trained facilitators to update their knowledge in test construction and workshops and seminars should be organised for facilitators as regards software packages in education.

**Keywords:** Assessment, Training needs, Live Streaming, Test Construction, Software Packages facilitators

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## Introduction

Education is a veritable tool for nation building. It is an instrument for empowering young people with knowledge and skills which provide them access to productive employment (National Planning Commission, NPC, 2013). Osuji and Ugorji (2019) opined that education does not only improve individual choices available to mankind but also an educated population provides the type of skilled labour necessary for individual development and economic growth. The provision of quality education to millions has been one of the struggles facing developing such as Nigeria. Experience both national and internationally have shown conventional education is extremely hard pressed to meet the demands of today's socio educational milieu. However, today education has become more accessible from home, work and the office. One of the education processes that has made this possible is the open and distance learning.

Open and distance learning refers to the type of education that takes place outside the conventional school system; it is imparted without necessarily having personal interaction with students or learners

(Marayo, 2013). Open and distance learning give the learner more freedom of access as well as wider range of opportunities for learning and qualifications, thereby improving their social status. In the view Wordu (2022), Open and distance learning as the teaching and learning situation in which instructor and learner are engaged in interactive instructional setting though separated geographically by time and space. Supporting this view, Messo, (2015) saw open and distance learning as an education and training in which using multimedia learning resources and lecture posted notes online, rather than attending classroom sessions, are the central features of learning experience. Open distance learning allude to an instructive framework wherein facilitators are isolated by separation yet to accomplish the fundamental coordinated effort among educators under study, despite everything keep in touch using ICT foundations to accomplish wanted target.

Open and distance learning in Nigeria has come to stay. Open and distance learning is therefore a form of non-formal education through which organized learning activities and opportunities are provided to learners who study individually. It was introduced to Nigeria in 1983 but became functional in year 2002 with the establishment of NOUN.

The vision is to provide highly accessible and enhanced quality education anchored by social justice, equity and national cohesion through a comprehensive reach that transcends all barriers. (Alaezi, 2016). Distance education are given support by means of facilitation, peer interaction and support and the supplied materials (Garrison & Baynton, 2017). The assignments, tests and examinations that are compiled by the module coordinators are marked by the facilitators, but moderated by the module coordinator as a way of ensuring quality. The Open and Distance Learning (ODL) programme has been considered as one of the most important educational innovations in Nigeria. Open and Distance Learning has provided opportunities for those who could not afford to leave their job to attend to fulltime conventional education.

A facilitator is an individual who help a group of persons to reach an outcome attain a better results. They are responsible for guiding, mentoring, and managing a learner to the completion of an educational event. Facilitators are indispensable in the achievement of open distance learning goals and objectives. Facilitators can be internal or external to the setting where implementation occurs and a combination of the two is frequently reported (Cranley 2016). A facilitator is someone who is skillfully helps a group of people understand their common objectives and assists them to achieve them without taking a particular position in the discussion. Facilitators are expected to have specific characteristics and skills (McCormack, 2013). For a school to produce the type of people that will manage the resources of our society efficiently, the facilitators must be up to date knowledgeable and skillful (Wey-Amaewhule & Okenema, 2022). Facilitators who are not knowledgeable in certain areas need to be trained in order to remain effective in content delivery.

Training needs means the changes required in the skills, knowledge and behaviours of facilitators to achieve purpose and overcome difficulties. The purpose of training need assessment is to identify performance requirement and the knowledge, skills, and abilities needed by a facilitator to achieve stated educational objectives. Andronescu and Solomon in Abuoelenein (2016) defined training needs as all of the changes required in the knowledge, skills, and experience of an individual to get him fit to effectively fulfil the duties of his present job. Boon, Lutz and Marburger, (2015) stated that training needs are knowledge, skills and attitude that need to be changed or modified at the trainee to cope with contemporary or development aspects. To this end, Abuoelenein (2016) stated that training need is the present reality of facilitator's performance and what should this performance be in future in order to face changes and development in knowledge, skills, attitudes and abilities. It is worthy to note that the emphasis of this research is placed on training need as regards live streaming, software packages and test construction.

Live streaming is a way of connecting with people around the world using internet technology. Svart (2018) stated with exaggerating that live streaming allows broadcasting of an event in the actual time it is happening on the internet, plus the audience can watch it without the hassle of downloading the content first onto the computer live streaming media is growing rapidly due to the increasing use of mobile devices. Streaming media consists of video and audio content sent in a compressed digital format over the Internet and seen by multiple viewers immediately in real-time. Live streaming requires a streamer who is broadcasting in real-time to viewers who can give comments on a chat (Chen, Freeman, & Balakrishman, 2019). BoxCast Team (2019) explained that general live streaming services like Facebook Live and YouTube Live started in 2013, when they were only available to high-profile creators. Live streaming enables educators to keep pace with globalization. Live streaming is an activity that supports independent learning as it allows learners to use it at their own preferred time.

A software applications typically contains related programme that can perform different function. A software is a bundle of collection of related programmes that works together to fulfil specific task. Software is a programme that enables a user to perform some specific tasks. Software application is a term used generally for programmes created to perform specific tasks for an end user. Software applications are forms of technologies that exposes its recipients with practical skills and experience in the workplace (Christensson, 2019). Software applications are technologies designed to prepare graduates with varieties of careers in high-tech business office (Ogundele & Lawal, 2018). Software applications are technologies that present better ways of performing a particular task without using the traditional methods. Onojetah and Utoware, (2019) opined that the introduction of technology has made activities round the globe a bit easier, concrete, real and more result oriented, our routine has been digitized in all it aspects and not only in teaching and learning, but also in our workplace performance.

The term software application has been growing in popularity, in the Information Technology and academics world. However, software packages refers to set of electronic programmes instructions or data a computer processor reads in order to perform a task or operations. Zaine in Mbata, (2021) viewed Software applications as computer programmes designed to perform a group of coordinated functions, tasks or activities. Effectively, if the user is interacting directly with a piece of software it is called application software. These software applications enables the user to create various tasks and as such, are also called productivity programmes. Ryan (2013) opined that, software applications will address the dearth of technological skills and a growing demand for services of the skills in Nigeria. Mbata (2021) explained that software applications refers to the collection of software programmes that have been developed for the purpose of creating, modifying, managing, calculating, and disclosing information for commercial private and organizational purposes. This includes Microsoft word, PowerPoint, Microsoft Excel, canvas, desktop publishing, Google classroom, simulation, assessment software, Grammarly, amongst others.

Test construction refers to the act of planning, preparing, administering, scoring, statistically analyzing and reporting results of tests. Designing tests is an important part of assessing students' understanding of course content and their level of competency in applying what they are learning. Classroom assessment is an integral part of teaching and may take up more than one third of a teacher's class time (Ainsworth & Viegut in Johnson, 2016). Most classroom assessment involves tests that teachers have constructed themselves. Teacher-made tests are used in a typical classroom, resulting in perhaps billions of unique assessments yearly worldwide. Teachers regularly use tests they have constructed themselves (Angelo & Cross in Johnson, 2016). Teachers put greater store by

their own tests in determining grades and student progress than they do by assessments designed by others or by other data sources. Most teachers believe that they need strong testing skills, while some report that they are confident in their ability to produce valid and reliable tests and others report a level of discomfort with the quality of their own tests or believe that their training was inadequate (Johnson, 2016).

A manual for testing produced by the University of Washington (2015) gives some guidelines that could aid test-item generators in test construction. Some of these general guidelines are: considering reasons for testing; maintaining consistency between goals for the course, methods of teaching, and the tests used to measure achievement of goals; using testing methods that are appropriate to learning goals; helping students prepare; using consistent language (in stating goals, in talking in class, and in writing test questions) to describe expected outcomes; and designing test items that allow students to show a range of learning. Guskey in Johnson (2016) explained that planning for the test involves outlining subject matter content, identifying learning outcomes, preparing a table of specifications, and choosing appropriate test types. Test preparation activities involve writing the test items according to rules, selecting items to be included, arranging items, and preparing directions for the test. In order to analyse and revise test construction activities, one needs to perform test analysis so as to retain or discard of test items. It is believed by the researcher that test constructors need to have knowledge and understanding of the materials being tested, have continuous awareness of objectives and understanding of the learners for whom the items are intended. Test item writers should possess skills in written communication and the techniques of item construction. The researcher concluded that high level of difficulty experienced by facilitators in constructing test items for Open and Distance Learning students suggest the need for training them improve their capacity in this regard.

### **Statement of the Problem**

Open distance education aimed at providing an increase access to education for those who have difficulty in accessing it within the mainstream such as the poor, illiterate, women, marginalized and those living in remote areas. Despite being physically separated from the student the facilitator communicate with the learners through communication technologies. Today, Open and Distance Education is gaining recognition both nationally and internationally as a credible alternative to traditional or conventional mode of education as it makes education accessible and reduces cost while maintaining quality. The use of Open and Distance Learning makes for equity of educational opportunities and services. It has become fully integrated into the Nigerian higher education system. However, some facilitator seems to be struggling and seems not to be fulfilling the learning gaps of the students to make them competitive in the world of work among their peers. Schamber (2018) stated that facilitators some facilitators often find it difficult to adjust from being a lecturer with conventional mode to facilitators. The researcher observed that as a result of poor training giving to facilitators without considering the areas of training needs, they become ineffective on their job performance. The scenario described above shows unequivocally that there is a research-based knowledge gap that has to be objectively addressed by this kind of study. This makes the completion of this study necessary in order to objectively verify the facts and close the apparent research-based knowledge gap empirically. This assumption led the researcher to decide that it would be appropriate to assess training needs of facilitators in Open and Distance learning in tertiary institutions in Rivers State.

### **Purpose of the Study**

The purpose of this study was to examine Assessment of Training needs of facilitators in Open and Distance learning in tertiary institutions in Rivers State. Specifically, the study sought to:

1. To examine the training need of facilitators as regards live streaming in open and distance learning in tertiary institutions in Rivers State
2. To examine the training need of facilitators as regards test construction in open and distance learning in tertiary institutions in Rivers State
3. To examine the training need of facilitators as regards software packages in open and distance learning in tertiary institutions in Rivers State

### **Research Questions**

The following research questions guided the study.

1. To what extent does facilitators need training as regards live streaming in open and Distance learning in tertiary institutions in Rivers State?
2. To what extent does facilitators need training as regards test construction in open and distance learning in tertiary institutions in Rivers State?
3. To what extent does facilitators need training as regards software packages in open and distance learning in tertiary institutions in Rivers State?

### **Hypotheses**

The following hypotheses were formulated and tested at 0.05 level of significance.

1. There is no significant difference in the mean ratings of male and female facilitators as training need as regards live streaming in open and distance learning in tertiary institutions in Rivers State.
2. There is no significant difference in the mean ratings of male and female facilitators as training need as regards test construction in open and distance learning in tertiary institutions in Rivers State.
3. There is no significant difference in the mean ratings of male and female facilitators as training need as regards software packages in open and distance learning in tertiary institutions in Rivers State

### **Methodology**

The study adopted a descriptive survey research design which sought to collect data on the opinions of the participants with a view of assessing training and support needs for facilitators in Open and distances learning in tertiary institutions in Rivers State. The population of this study was 311 facilitators from Faculty of Education in Rivers State University, University of Port Harcourt and Ignatius Ajuru University of Education. The entire population was used as sample size which census sampling technique was used. (98) Rivers State University, (128) University of Port Harcourt and (85) Ignatius Ajuru university of Education. The instrument used for conducting the study was questionnaire titled “Assessment of training needs of facilitators Questionnaire (ATNFQ)”, designed by the researchers on a 4-point scale of Strongly Agree (SA), Agree, Disagree and Strongly Disagree weighted 4,3,2 and 1 respectively. The face and content validity of the instrument were determined by two other experts in educational management one in Measurement and Evaluation in Rivers State University. Cronbach alpha was used to determine the reliability of the instrument. This yielded a high reliability coefficient of 0.83 and 0.85 for Parts A and B respectively. 311 copies of the questionnaire were distributed by the researchers together with research assistants, who were briefed on how approach

the facilitators in filling the copies of the questionnaire. 283 copies of questionnaire were properly filled and returned. The research questions were answered using mean and standard deviation. The mean responses on the research questions were adjudged on the following basis of any mean score that falls below 2.50 will be taken as disagreement and any mean score of 2.50 or above was taken to indicate agreement. The statistical tool used for the hypotheses testing was the z-test statistical tool and decisions for the hypotheses was made according to the decision rule of z-test.

## Results

**Research Question 1:** To what extent does facilitators need training as regards live streaming in open and Distance learning in tertiary institutions in Rivers State?

**Table 1: Mean and Standard Deviation on extent facilitators Need Training as Regards Live Streaming in Open and Distance Learning in Tertiary Institutions in Rivers State (N = 283)**

S/N	Item Statements	Male = 162		Remarks	Female = 121		Remarks
		$\bar{x}$	SD		$\bar{x}$	SD	
1	Facilitators needs training as regards streaming software	3.14	1.06	Strongly Agree	3.26	0.98	Strongly Agree
2	There is need for facilitators to be trained in live streaming equipment	3.41	0.81	Strongly Agree	3.76	0.62	Agree
3	Facilitators needs training relating to various live streaming platforms	3.58	0.77	Strongly Agree	3.37	0.86	Strongly Agree
4	Facilitators needs training as regards lightening in live streaming	3.57	0.85	Strongly Agree	3.61	0.71	Strongly Agree
5	Facilitators needs training as regards production in live streaming.	3.58	0.69	Strongly Agree	3.41	0.78	Agree
<b>Total</b>		<b>17.28</b>	<b>4.18</b>		<b>17.41</b>	<b>3.95</b>	
<b>Grand Mean &amp; SD</b>		<b>3.45</b>	<b>0.83</b>		<b>3.48</b>	<b>0.79</b>	

Source: Field Survey, (2023)

Table 1 which was for research question one showed that all the items were rated high extent. The implication is that facilitators needs training to a high extent in live streaming. The confirmation was made with a grand mean of 3.26 and standard deviation of 0.89 for male while that of female were 2.98 and 0.99 for mean and standard deviation.

**Research Question 2:** To what extent does facilitators need training as regards test construction in open and distance learning in tertiary institutions in Rivers State?

**Table 2: Mean and Standard Deviation on Extent Facilitators Need Training as Regards Test Construction in Open and Distance Learning in Tertiary Institutions in Rivers State (N = 283)**

S/N	Item Statements	Male = 162		Remarks	Female = 121		Remarks
		$\bar{x}$	SD		$\bar{x}$	SD	
6	Communication Skills gives facilitators the Ability to plan test effectively	3.22	0.97	Strongly Agree	3.63	0.73	Strongly Agree
7	Facilitators need training on how to construct essay test	3.70	0.62	Strongly Agree	3.76	0.59	Strongly Agree
8	Facilitators need training on how to arrange a test	3.52	0.68	Strongly Agree	3.49	0.77	Strongly Agree
9	Facilitators need training on how to construct multiple choice question	2.85	0.94	Agree	3.47	0.88	Agree
10	Facilitators need training on when to apply appropriate test.	3.41	0.90	Strongly Agree	3.69	0.67	Strongly Agree
<b>Total</b>		<b>16.7</b>	<b>4.11</b>		<b>18.04</b>	<b>3.64</b>	
<b>Grand Mean &amp; SD</b> =		<b>3.34</b>	<b>0.82</b>		<b>3.60</b>	<b>0.72</b>	

**Source: Field Survey, (2023)**

The results in table 4.2 shows that all the items on the table were rated high extent by the facilitators. This implies that the facilitators needs to be effectively trained in test construction. This confirmation was made by the grand mean of 3.22 and 2.90 for male and female respectively

**Research Question 3:** To what extent does facilitators need training as regards software packages in open and distance learning in tertiary institutions in Rivers State?

**Table 3: Mean and Standard Deviation on extent Facilitators Need Training as Regards Software Packages in Open and Distance Learning in Tertiary Institutions in Rivers State (N = 283)**

S/N	Item Statements	Male = 162		Remarks	Female = 121		Remarks
		$\bar{x}$	SD		$\bar{x}$	SD	
11	Facilitators need proper training in use of canvas	3.65	0.70	Moderate Extent	3.35	0.89	Moderate Extent
12	Facilitators needs to be trained as regards use of grammarly	3.48	0.68	High Extent	3.23	0.75	High Extent
13	Facilitators are confident that they need training in the use of excel	3.38	0.90	High Extent	3.69	0.63	High Extent
14	Facilitators can install and uninstall a program or application	3.53	0.77	High Extent	3.39	0.94	High Extent
15	Facilitators needs training in the use of assessment software	3.40	0.80	Moderate Extent	3.35	0.86	High Extent
<b>Total</b>		<b>17.44</b>	<b>3.85</b>		<b>17.01</b>	<b>4.07</b>	
<b>Grand Mean &amp; SD</b> =		<b>3.48</b>	<b>0.77</b>		<b>3.40</b>	<b>0.81</b>	

**Source: Field Survey, (2023)**

Table 3 which was for research question two showed that all the items were rated high extent. This implies that the respondent needs training as regards the use of software applications in open and distance learning. The confirmation was made with a grand mean of 3.27 and 0.8 while standard deviation of 3.08 and 1.00 for both Male and Female.

### Test of Hypotheses

**Hypothesis 1:** There is no significant difference in the mean ratings of male and female facilitators training need as regards live streaming in open and distance learning in tertiary institutions in Rivers State.

**Table 4: z-test Analysis of Mean Ratings of Male and Female Facilitators Training Need As Regards Live Streaming in Open and Distance Learning in Tertiary Institutions in Rivers State.**

Respondents	N	$\bar{x}$	SD	Std Error	df	Sig. Level	z-cal	z-crit	Decision
Male	162	3.45	0.83						
				0.009	281	0.05	0.33	1.96	Accepted
Female	121	3.48	0.79						

Source: Field Survey, (2023)

The data in table 4 revealed that the calculated z-test value of Male and Female mean were 3.45 (Male) 3.48 (Female) respectively, while the critical z value was 1.96 at degree of freedom of 281 at 0.05 significance level. Therefore, the null hypothesis was accepted.

**Hypothesis 2:** There is no significant difference in the mean ratings of male and female facilitators training need as regards software packages in open and distance learning in tertiary institutions in Rivers State.

**Table 5: z-test Analysis of Mean Ratings of Male and Female Facilitators Training Need as Regards Software Packages in Open and Distance Learning in Tertiary Institutions in Rivers State.**

Respondents	N	$\bar{x}$	SD	Std Error	df	Sig. Level	z-cal	z-crit	Decision
Male	162	3.34	0.82						
				0.008	281	0.05	0.24	1.96	Accepted
Female	121	3.60	0.72						

Source: Field Survey, (2023)

The data in table 5 revealed that the calculated z-test value of Male and Female mean scores were 3.34 (Male) 3.60 (Female) respectively, while the critical z value was 1.96 at degree of freedom of 281 at 0.05 significance level. Therefore, the null hypothesis was accepted.

**Hypothesis 3:** There is no significant difference in the mean ratings of male and female facilitators training need as regards test construction in open and distance learning in tertiary institutions in Rivers State.

**Table 6: z-test Analysis of Mean Ratings of Male and Female Facilitators Training Need as Regards Test Construction in Open and Distance Learning in Tertiary Institutions in Rivers State.**

Respondents	N	$\bar{x}$	SD	Std Error	df	Sig. Level	z-cal	z-crit	Decision
Male	162	3.48	0.77						
				0.009	281	0.05	0.88	1.96	Accepted
Female	121	3.40	0.81						

Source: Field Survey, (2023)



The data in table 6 revealed that the calculated z-test value of Male and Female mean scores were 3.48 (Male) 3.40 (Female) respectively, while the critical z value was 1.96 at degree of freedom of 281 at 0.05 significance level. Therefore, the null hypothesis was accepted.

### **Discussion of Findings**

The findings obtained on research question 1 on Table 1 indicated that facilitators needs training as regards live streaming in open and distance learning in tertiary institutions in Rivers State. This findings is in agreement with the view of Svart (2018) who stated that live streaming allows broadcasting of an event in the actual time it is happening on the internet, plus the audience can watch it without the hassle of downloading the content first onto the computer live streaming media is growing rapidly due to the increasing use of mobile devices. In line with the view of Svart, Live streaming requires a streamer who is broadcasting in real-time to viewers who can give comments on a chat (Chen, Freeman, & Balakrishman, 2019). The researcher is of the view that streaming media consists of video and audio content sent in a compressed digital format over the Internet and seen by multiple viewers immediately in real-time.

Hypothesis 1 on Table 4 shows that there is no significant difference in the mean ratings of male and female facilitators as training need as regards live streaming in open and distance learning in tertiary institutions in Rivers State.

The findings obtained on research question 2 on Table 2 indicated that facilitators needs training as regards test construction in open and distance learning in tertiary institutions in Rivers State. This findings is in line with the view of Ainsworth and Viegut in Johnson, (2016) who stated that designing tests is an important part of assessing students' understanding of course content and their level of competency in applying what they are learning. Classroom assessment is an integral part of teaching and may take up more than one third of a teacher's class time. The researcher is of the view that test preparation activities involve writing the test items according to rules, selecting items to be included, arranging items, and preparing directions for the test.

Hypothesis 2 on Table 5 shows that there is no significant difference in the mean ratings of male and female facilitators as training need as regards test construction in open and distance learning in tertiary institutions in Rivers State.

The findings obtained on research question 3 on Table 3 indicated that facilitators needs training as regards software packages in open and distance learning in tertiary institutions in Rivers State. This findings is in line with the view of Mbata, (2021) who stated that software applications refers to the collection of software programmes that have been developed for the purpose of creating, modifying, managing, calculating, and disclosing information for commercial private and organizational purposes. This includes Microsoft word, PowerPoint, Microsoft Excel, canvas, desktop publishing, Google classroom, simulation, assessment software, Grammarly, amongst others. The researcher is of the view that software applications refers to set of electronic programmes instructions or data a computer processor reads in order to perform a task or operations.

Hypothesis 3 on Table 6 shows that there is no significant difference in the mean ratings of male and female facilitators as training need as regards software packages in open and distance learning in tertiary institutions in Rivers State.

### **Conclusion**

Based on the findings of the study, the researcher concluded that facilitators in open and distance learning needs training in areas such as live streaming, test construction and usage of software

applications to a high extent. Also there is no significant difference in their mean ratings to this regards.

### **Recommendations**

The following recommendations need to be implemented in order to improve the situation within the area of Open and Distance Learning:

1. Facilitators should be trained periodically on live streaming technologies.
2. Experts in psychometrics should trained facilitators to update their knowledge in test construction
3. Workshops and seminars should be organised for facilitators as regards software packages in education.

### **References**

- Abuoelenein, Y. A. (2016). Training needs for faculty members: towards achieving quality of university education in the light of technological innovations. *Educational Research and Review Academic Journal* 11(13) 180-193.
- Aleazi, O. (2016). Open University as a Model of Excellence (Online) Retrieved from [http://people.usi.edu/schri/onlinelearning/2011/10/nationalopenuniversityof Nigeria as html](http://people.usi.edu/schri/onlinelearning/2011/10/nationalopenuniversityof%20Nigeria%20as%20html), October. International Telecommunication Union (ITU), (2008). ICT statistics.
- Boon, A.T., Lutz, D. J., & Marburger, K. M (2015). Eliminating postdoctoral training as a requirement for licensure: perceptions and anticipated impacts. *Professional psychol Res. Practice* 48 (1) 62-69.
- BoxCast Team (2019). State of live streaming in 2019: Last 5 Years + Next 5 Years. <https://www.boxcast.com/blog/state-of-live-streaming-in-2019-last-5-years-next-5-years>.
- Chen, D. L., Freeman, D., & Balakrishnan, R. (2019). Integrating multimedia tools to enrich interactions in live streaming for language learning. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (Paper No. 438). New York: ACM. <https://doi.org/10.1145/3290605.3300668>
- Christensson, D. (2019). On the issues of digital competence in educational contexts—a review of literature. *Education and— Information Technologies*, 23(3), 1005-1021
- Cranley LA, (2016). Facilitation roles and characteristics associated with research use by healthcare professionals: a scoping review. *BMJ Open*. 2017. [https:// doi. org/ 10. 1136/ bmjop en- 2016- 014384](https://doi.org/10.1136/bmjopen-2016-014384).
- Garrison, D. R. and Baynton. M. (2017). Beyond independence in distance education: The concept of control. *The American Journal of Distance Education* 1 (3): 3–15.
- Johnson, O. (2016). Assessment of teachers knowledge of essay and multiple choice tests constructions in secondary school chemistry in Bwari Area Council, Abuja. *International Journal of Science and statistics in Education* 3(6)49-55

- Marayo, J, (2013). An appraisal of the open and distance learning programme in Nigeria. *Journal of Education and Practice* 4, (3) 34-56.
- Mbata, E. I. (2021). Software Application Skill Acquisition and Job Performance among Secretaries in Rivers State Universities Unpublished M.Sc Dissertation, Rivers State University, Nkpolu-Oroworukwo, Port Harcourt.
- McCormack B, (2013). A realist review of interventions and strategies to promote evidence-informed healthcare: a focus on change agency. *Implement Sci.* 10(3) 1186-1748
- Messo, R.T. (2015). Open distance learning for development: lessons from strengthening research capability on gender crisis prevention and recovery. *International review of research in open and distance learning*, 2(4), 24-33.
- National Planning Commission (2013). Nigeria Vision 20:20 the first national implementation plan. vol 1
- Ogundele, I. S. & Lawal, L. (2016). Influence of New Technologies on the teaching of \ Business Education courses in tertiary institutions in Kwara State. *Nigerian Journal of Business Education (NIGJBED)* 3, (2)86-93.
- Onojetah, S. O., & Utoware, J. D. A. (2019). Challenges and strategies for new technologies application in teaching and learning Business Education in the E-world in Universities in South East Nigeria. *Nigerian Journal of Business Education* 6(1), 265-270.
- Osuji, C. U., & Ugorji, S. C. (2019) E-learning as a strategy for human capacity development: implications for educational management in Rivers State. *International Journal of Innovative System & Technology Research* 7(3), 34-44
- Ryan, K. N. (2013). Harnessing emerging technologies for education communication: *Journal of Mass Communication and Journalism*, vol. 4, 2-8. Doi:/0.4172/21657912.1000207.
- Schamber F. (2018). Issues of digital competence in educational contexts—a review of literature. *Education and Information Technologies*, 23(3), 1005-1021.
- Svart, A. (2018). The Use of live streaming in marketing. Bachelor's thesis programme international business administration, Tallinn: Tallinn University of Technology.
- Washington, G. (2015). Educative assessment: Designing assessments to inform and improve student performance. San Francisco, CA: Jossey-Bass.
- Wey-Amaewhule, B., & Okenema, E. F. (2022). Teacher's development strategies for job performance in Public secondary schools Bayelsa State. *Academic scholarship Journal*, 18(2), 2141-3428.
- Wordu, H. (2022) "Competencies Required for the Facilitation of Online Learning Courses: An Online Teaching Assistants Competency-Based Approach", *Mediterranean Journal of Social Sciences* 5(23), 56-65