Encouraging Global Competitiveness through Virtual Learning Oppourtunities for Out-of-School Children in Rivers State, Nigeria

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ABSTRACT

The paper focused on encouraging global competitiveness through virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria. Three research questions and three hypotheses were answered and tested in the study.The study employed descriptive survey design while the population was 780 principals out of which 264 principals were sampled using stratified random sampling technique. The instrument used for data collection was a 15 item questionnaire tagged "Encouraging Global Competitiveness through Virtual Learning Oppourtunities Questionnaire" (EGCVLOQ). The questionnaire was face and content validatedby three Educational Management expertsat Rivers State University. Reliability of the questionnaire was determined using Cronbach Alpha with acoefficient of 0.81. There were 264 copies of the questionnaire administered while 247 copies representing 93.6% was retrieved. Research questions raised were answered using mean and standard deviation while the hypotheses were tested using z-test at 0.05 level of significance. The result of the study indicated that virtual learning will promote inclusivity, flexibility and build the technical competence of the learners for global competiveness for out of school children. It was indicated that lack of internet service and ICT tools were limitations to virtual learning for global competiveness of out of school children. It was recommended in line with the finding of the that government should provide customized digital tools for virtual learning and global competiveness of the out of school children.

Keywords: Global Competitiveness, Virtual Learning, Education, Out-of-School Children, Nigeria.

INTRODUCTION

Education all over the world as well as in Nigeria as captured in the national policy on education (Federal Republic of Nigeria, 2013) is an instrument per excellence for achieving national growth and development. The importance of education to national building and global peace form the basis for the recommendation by UNESCO that countries should ensure that 26% of their annual budget is allocated to the education sector. This is targeted at increasing access and quality of education across all levels in both developed and developing nations.The government of Nigeria has invested heavily in the education sector especially in the area of providing free and compulsory education through the Universal Basic Education (UBE) programme which is targeted at increasing school enrollment as well as literacy rate of the citizens (FRN, 2013). However, despite this effort, over 10million Nigerian children still remain out of school. This has not only reduced the rate of literacy but also hindered national growth and development limiting the nation from being able to compete with other developing and developed nations globally.

Achieving global competitiveness through the reduction of educational inequalities and promoting enrollment is part of the goals of the Sustainable Development Goals which targets the provision of quality education and reduction of inequalities. This is targeted at ensuring global competition and development in the long run. However, meeting this target has been a herculean tasks given the high number of Nigerian children who are out of school. This has also hindered the ability of the nation to compete with others globally in terms of quality of education and literacy rate among others.Babalola and Raji (2018) revealed that countries differ in global competitiveness and this is largely as a result of difference in education, technology and innovation policy thrusts especially between in Ghana and Nigeria. The inability of the Nigerian government to invest in education and technology has limited its ability to deal with the rate of out of school children and compete properly with other nations of the world both educationally and otherwise. No doubt, digital technologies are

making significant impact in classroom related activities (Wagbara& Amaewhule, 2023).Yildiz (2016) further stated that many of the developing countries appear to gain only small fraction of the advantages from the ICT sectors in the pursuit of their educational goals and objectives for global competiveness. Babalola and Raji (2018) stated that this global competiveness is measured in terms ofinstitutions, infrastructure, macroeconomic environment, health and primary education, efficiency enhancers, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, innovation & sophistication as well as business sophistication. All of these cannot be achieved without adequate investment in the education sector.

One of the strategies that has been adopted all over the world for the addressing the issue of out of school children for global competitiveness is by leveraging on emerging technologies through the advancement of virtual learning oppourtunties. Al-Obaydi (2020) stated that virtual learning is simply a kind of learning that is carried out on the web or any e-learning platform. Similarly, Harmer (2012) stated that it is an online site where students can learn and interact with their instructor. In the face of the educational gaps across the different spectrum of the country, the need for leveraging on virtual learning platforms to gather students into a single location where they can interact with a teacher at scheduled intervals is becoming essential. There is no doubt that one of the benefits of virtual learning platforms is that it has proven useful for education in emergencies such as the out of school children case in the country.

There are several factors that have limited the application of virtual learning to address the out of school children crisis for global competitiveness. Eghe-Ohenmwen (2015) identified that there is the problem of accessing software, funding, staffing, internet and other electronic resources which makes it difficult for virtual learning to be enforced to reach the unreached. On the other hand, Saleem et al., (2022)also pointed out that there is the problem of university support, instructors' support, and motivational factors which also affects the quality of online learning. Research such as the one carried out by Al-Mobaideen et al., (2012) has shown that the impact of electronic learning systems in term of training the users, infrastructures, the system ability, the powers granted for the users,and technological acceptance form on the effectiveness of the system, are all significant but putting this measures in place remains a challenge for the government. However, Mazlan et al., (2021) also indicated that for this goal to be possible, emphasis must be placed on learner motivation and use of suitable online platforms for carrying out virtual teaching and learning.

The study conducted by Tanase et al., (2022) on online education in the COVID-19 pandemic focusing on premise for economic competitiveness growthwas a survey conducted in Romania among two samples of respondents which were; one made of 173 university professors and the other consisting of 732 students. The findings of the study show that both professors and students have a high level of acculturation to the new teaching techniques, with a high percentage of professors (51.4%) believing that online education can play a significant role in the advancement of society and the improvement of economic competitiveness (60.7%).Elumalai et al., (2020) equally investigated the factors affecting the quality of e-learning during the COVID-19 pandemic from the perspective of higher education students. A cross-sectional study was carried out using a self-administered questionnaire to find out how students in higher education institutions in India and the Kingdom of Saudi Arabia felt about e-learning. 784 students were included in the study's sample. The gathered data were examined using structural equation modeling (SEM). The results showed a strong correlation between the variables and the high caliber of e-learning in the higher education market. The perception of the students regarding gender, course difficulty, and e-learning quality in the higher education sector during the COVID-19 pandemic also differs significantly.

Semlambo et al., (2022) investigated the factors affecting the adoption of e-learning systems in public higher learning institutions in Tanzania focusing on the Institute of Accountancy Arusha (IAA). The study employed a mixed methodology. There were 126 employees who were chosen at random from the study's sample of 187 teaching staff members. According to the study, factors preventing the adoption of e-learning systems in Tanzania's public higher education institutions include a lack of ICT infrastructure, a lack of managerial and technical support, and a lack of computer skills among facilitators. In order to support e-learning, the study advised investments in facilities with adequate and dependable ICT, high internet speed and bandwidth, policies that support e-learning, and training programs about the knowledge and use of e-learning.

Samman et al.,(2013) also conducted a study on strategic plan for enhancing online learning. The study found that among the key elements influencing student performance are insufficient preparation, a lack of motivation, and ineffective time management. This study evaluates and looks into the development of online learning and suggests ways to improve it. To compare campus-based and online courses and track their development over time, data was gathered. With an increase in passing rates over a three-year period, campus-based courses continue to have a higher pass rate than online courses. The outcomes provide a baseline for enhancing online learning practices and results over the following five years.

Aim and Objectives of the Study

The aim of the study was on encouraging global competitiveness through virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria. Specifically, the objectives of the study were to:

1. examine the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria
2. determine the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria
3. describe the strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children in Rivers State, Nigeria

Research Questions

The following research questions were answered in the study:
1. What are the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria?
2. What are the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria?
3. What are the strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children in Rivers State, Nigeria?

Hypotheses

The following hypotheses were tested at 0.05 level of significance:
1. There is no significant difference between the mean ratings of private and public school principals on the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria
2. There is no significant difference between the mean ratings of private and public school principals on the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria
3. There is no significant difference between the mean ratings of private and public school principals on the strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children in Rivers State, Nigeria

METHODOLOGY

The study adopted descriptive survey design. The population of the study was 780 principals with 286 being from public and 494 from privatesenior secondary schools in Rivers State. A sample size of 264 principals with 97 from public and 167 from private schools were drawn for the study using stratified random sampling technique by type of ownership after the Taro Yamane sample size determination formula was used to determine the sample size for the study. The instrument used for data gathering was a 15 item questionnaire titled "Encouraging Global Competitiveness through Virtual Learning Oppourtunities Questionnaire" (EGCVLOQ). The instrument was designed following a modified Likert scale of Strongly Agree (SA), Agree (A). Disagree (D) and Strongly Disagree (SD) with weights of 4, 3, 2 and 1. These weights were summed up and divided by 4 to arrive at 2.50 which is the criterion mean score used for decision making. The face and content validities of the questionnaire was determined three Educational Management experts ate Rivers State University. The reliability of the questionnaire was determined using Cronbach Alpha with an index of 0.81. The questionnaire was administered by the researcher with the help of four trained research assistants and out of a total of 264 copies administered, 247 with 92 from public and 155 from private schoolswhich represented93.6%, were retrieved. The research questions raised were answered using mean and standard deviation while the hypotheses were tested using z-test at 0.05 level of significance.

RESULTS

Answer to Research Questions

Research Question One: What are the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria?

Table 1: Mean and standard deviation scores on the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria

S/No	Items	Public Principals n=92		Private Principals n=155		Mean Set	
		Mean $\bar{X}_1$	SD	Mean $\bar{X}_2$	SD	X $\bar{X}$	Decision
1	Promote inclusivity in the	2.90	0.74	2.88	0.72	2.89	Agreed

	education system which leads to literacy						
2	There is flexibility in the teaching and learning process which makes it easy to connect with other learners	2.72	0.82	2.76	0.83	2.74	Agreed
3	It provides oppourtunity for quick feedback which is relevant for problem solving	2.68	0.87	2.72	0.87	2.70	Agreed
4	It improves the technical competencies of the learner	2.84	0.77	2.91	0.70	2.88	Agreed
5	There will be an increase in access to education and other learning oppourtunities	2.86	0.75	2.98	0.65	2.92	Agreed
	Grand Mean and Standard Deviation	**2.80**	**0.79**	**2.85**	**0.75**	**2.83**	**Agreed**

Table 1 indicated that while the public school principals responded to items 1, 2, 3, 4 and 5 with mean responses of 2.90, 2.72, 2.68, 2.84 and 2.86, the private school principals responded to the same set of items with mean responses of 2.88, 2.76, 2.72, 2.91 and 2.98. These responses were all above the criterion mean score of 2.50 used for making decision and this meant that the items listed were all ways virtual learning oppourtunities can contribute to global competitiveness for out of school children. The grand mean score of 2.80 and 2.85 from the public and private school principals as well as the average mean set score of 2.83 implied that the respondents averagely agreed on the items as the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria.

Research Question Two: What are the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria?

Table 2: Mean and standard deviation scores on the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria

S/No	Items	Public Principals n=92		Private Principals n=155		Mean Set	
		Mean $\bar{X}_1$	SD	Mean $\bar{X}_2$	SD	X $\bar{X}$	Decision
6	Majority of the learners have problem with internet access	2.94	0.71	2.77	0.82	2.86	Agreed
7	There is shortage of ICT resources needed for the students to learn	2.92	0.73	2.80	0.79	2.86	Agreed
8	The course content is not virtually suitable for the learners to learn	2.47	1.02	2.42	1.01	2.45	Agreed
9	Low teachers technical competencies limits how much the students can benefit	2.83	0.75	2.44	1.00	2.64	Agreed
10	Commitment of educational stakeholders to virtual learning is low	2.56	0.91	2.61	0.92	2.59	Agreed
	Grand Mean and Standard Deviation	**2.74**	**0.82**	**2.61**	**0.91**	**2.68**	**Agreed**

Table 2 pointed that the public and private school principals responded to items 6, 7, 8, 9 and 10 with mean values of 2.94, 2.92, 2.47, 2.83 and 2.56 as well as 2.77, 2.80, 2.42, 2.44 and 2.61. Items with mean responses above 2.50 were agreed while those below 2.50 were disagreed. While all other items were agreed, the principals both disagreed with item 8 that the course content hindered virtual learning oppourtunities for the learners. The grand mean responses of 2.74 and 2.61 from

the public and private principals agreed with the average mean set score of 2.68 to indicate that the respondents averagely agreed on the items listed as the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria.

Research Question Three: What are the strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children in Rivers State, Nigeria?

Table 3: Mean and standard deviation scores onthe strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children inRivers State, Nigeria

S/No	Items	Public Principals n=92		Private Principals n=155		Mean Set	
		Mean $\overline{X}_1$	SD	Mean $\overline{X}_2$	SD	X $\overline{X}$	Decision
11	There is need for public-private partnership to access relevant resources	2.74	0.81	2.85	0.74	2.80	Agreed
12	It is important for low price and customized learning tools to be provided for teachers and students	2.75	0.80	2.70	0.88	2.73	Agreed
13	Attention need to be paid to training teachers who will handle this process	2.81	0.79	2.72	0.87	2.77	Agreed
14	There is need for an ICT policy that will serve as framework for virtual learning	2.85	0.76	2.60	0.93	2.73	Agreed
15	Adequate funding is required for virtual learning to thrive	2.90	0.74	2.87	0.73	2.89	Agreed
	Grand Mean and Standard Deviation	**2.81**	**0.78**	**2.75**	**0.83**	**2.78**	**Agreed**

Table 3 showed that the public school principals responded to items 11, 12, 13, 14 and 15 with mean scores of 2.74, 2.75, 2.81, 2.85 and 2.90 while their private counterpart answered the same set of items with mean values of 2.85, 2.70, 2.72, 2.60 and 2.87. Since all the items had mean scores that were above the criterion mean score of 2.50 used for decision making, they were all agreed. The grand mean score of 2.81 and 2.75 from the public and private principals also align with the average mean set score of 2.78 to indicate that the respondents averagely agreed on the items listed as the strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children in Rivers State, Nigeria.

Test of Hypotheses
Hypothesis One: There is no significant difference between the mean ratings of private and public school principals on the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria

Table 4: Summary of z-test analysis on the difference in the mean ratings of private and public school principals on the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria

Variable	n	Mean	SD	df	z-cal.	z-crit.	Level of Significance	Decision
Public Principals	92	2.80	0.79					
				141	0.49	1.96	0.05	Retained
Private Principals	155	2.85	0.75					

Table 4 indicated that the value of z-crit. of 1.96 at 141 degrees of freedom and 0.05 level of significance was above the value of z-cal. of 0.49 and as such, the null hypothesis was retained meaning that there was no significant difference between the mean ratings of private and public school principals on the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria

Hypothesis Two: There is no significant difference between the mean ratings of private and public school principals on the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria

Table 6: Summary of z-test analysis on the difference in the mean ratings of private and public school principals on the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria

Variable	n	Mean	SD	df	z-cal.	z-crit.	Level of Significance	Decision
Public Principals	92	2.74	0.82					
				141	1.16	1.96	0.05	Retained
Private Principals	155	2.61	0.91					

Table 5 revealed that the value of z-crit. of 1.96 at 141 degrees of freedom and 0.05 level of significance was above the value of z-cal. of 1.16 and as such, the null hypothesis was retained implying that there was no significant difference between the mean ratings of private and public school principals on the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria.

Hypothesis Three: There is no significant difference between the mean ratings of private and public school principals on the strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children in Rivers State, Nigeria

Table 6: Summary of z-test analysis on the difference in the mean ratings of private and public school principals on the strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children in Rivers State, Nigeria

Variable	n	Mean	SD	df	z-cal.	z-crit.	Level of Significance	Decision
Public Principals	92	2.81	0.78					
				141	0.57	1.96	0.05	Retained
Private Principals	155	2.75	0.83					

Table 6 showed that the value of z-crit. of 1.96 at 141 degrees of freedom and 0.05 level of significance was above the value of z-cal. of 0.57 and as such, the null hypothesis was retained indicating that there was no significant difference between the mean ratings of private and public school principals on the strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children in Rivers State, Nigeria.

DISCUSSION OF FINDINGS

The study was able to reveal from its finding that the public and private school principals averagely agreed on the items as the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria. It was equally indicated that that there was no significant difference between the mean ratings of private and public school principals on the ways virtual learning oppourtunities can contribute to global competitiveness for out-of-school children in Rivers State, Nigeria. A related study by Tanase et al., (2022) showed that a high percentage of professors (51.4%) believing that online education can play a significant role in the advancement of society and the improvement of economic competitiveness (60.7%). This tells the importance of virtual learning in today's digital education system. The principals in their response both agreed that virtual learning oppourtunities can contribute to global competitiveness for out of school children by increasing inclusivity for literacy of the out of school children. The principals were also able to establish that part of the virtual learning oppourtunities will be flexibility of the learners to connect with other educational stakeholders, access to quick feedback in the process of solving educational problems, improvement in the technical competence of the learners an increased access to education for other learning oppourtunities. This study from the responses of the principals was able to establish that there are several ways in which in which virtual learning will contribute to global competitiveness for the out of school children.

The responses from the principals showed that they averagely agreed on the items listed as the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria and that there was no significant difference between the mean ratings of private and public school principals on the factors hindering virtual learning oppourtunities for out-of-school children in Rivers State, Nigeria. This result agrees with the outcome of the study by Semlambo et al., (2022) which indicated that factors preventing the adoption of e-learning systems in Tanzania's public higher education institutions

include a lack of ICT infrastructure, a lack of managerial and technical support, and a lack of computer skills among facilitators. This tells that a lot needs to be done by various educational stakeholders if virtual learning must come to the rescue in reducing the cases of out of school children for global competitiveness. The principals both agreed that the issue of lack of access to the internet, inadequate ICT tools as well as commitment of educational stakeholders were the major factors hindering virtual learning oppourtunities for the out of school children. These factors limit how much can be benefited from virtual learning for improving the global competitiveness of out of school children and agrees with the result of the study by Elumalai et al., (2020) which identifies that there are still difficulties in the operation of any form of online learning. However, the principals both disagreed that the course content taught to the learners hinder the adoption of virtual learning. This suggests that virtual learning can actually be adopted for any kind of course content which will be for the benefit of the learners. However, while the public school principals agreed, the private school principals disagreed that teachers' technical competence was a hindering factor to virtual learning and this suggests a growth in teachers' technical competence but which may not have reached the height required for sustainable virtual learning.

It was revealed that the respondents averagely agreed on the items listed as the strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children in Rivers State, Nigeria. The study also established that there was no significant difference between the mean ratings of private and public school principals on the strategies for enhancing virtual learning oppourtunities for global competitiveness of out-of-school children in Rivers State, Nigeria. The principals both agreed that public private partnership, provision of low cost ICT tools, training of teachers, implementation of an ICT policy and adequate funding will be needed for enhancing virtual learning oppourtunities that will improve on the global competitiveness of out of school children. According to the result of the study by Samman et al., (2013), a difference still exists between the performance of students taught online and on campus in favour of those on campus and this shows the need for more decisive action for virtual learning to succeed in meeting the nations educational needs. This suggests that a lot more effort is still required for the implementation of virtual learning that will improve on the educational prospects of out of school children for global competeveness in the country. Therefore, all educational stakeholders will need to cooperate for virtual learning to actually become an option for out of school children to be assisted and to contribute to global competitiveness in the country.

CONCLUSION

The study concluded that there is no significant difference in the virtual learning oppourtunities between the public and the private schools for global competitiveness. The factors hindering the virtual learning oppourtunities of the public schools included lack of ICT resources and technical expertise. This means that the private schools are better prepared to adopt virtual learning for addressing the issue of out of school children for global competitiveness than the public schools except the identified constraints are addressed.

RECOMMENDATIONS

The following recommendations were based on the findings of the study:
1. The government needs to create virtual learning hubs in areas where majority of the out of school children are situated. This will make it easy to capture all of the children and connect them to the educational structure of the country for global competitiveness.
2. The government needs to invest heavily in the provision of customized digital tools and also train staff and students on the use of these devices. This strategy will help capture some of the out of school children and provide them access to formal education and this will improve on the competitiveness of the country.
3. The government needs to make legislations that will compel all out of school children to be registered in the virtual learning centres provided by the government and put in place punitive measures for violation. This will help in capturing the children who are out of school both in the urban and rural areas and integrate them into the education structure in the country for global competitiveness.

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