Assessment of Untrained Teachers' Utilization of Instructional Materials for Self Reliant Education and Global Competitiveness

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Abstract

The study sought to determine the extent of Untrained Teachers' Instructional delivery using instructional materials in Port Harcourt City Local Government Area of Rivers State, Nigeria for students self reliance and global competitiveness. The study was delimited to three specific objectives, three research questions and three null hypotheses were formulated to guide the study. The study adopted descriptive survey research design. The population comprised 177 teachers without educational qualification that have taught for the past three years from the study area. The entire population were sampled for the study. The researchers developed an instrument titled "Untrained Teachers Utilization of Instructional Material Questionnaire (UTUIMQ)" with eighteen (18) items to collect data. Cronbach Alpha reliability was used to determine the reliability of the instrument and an acceptable reliability coefficient of .89 was obtained. The data collected were analysed using Regression analysis to answer the research questions and to test the null hypotheses at .05 level of significance. The results revealed that untrained teacher's utilisation of instructional material relate to students self reliance positively for glok competitiveness given their competence and qualification.

Keywords: Assessment, Untrained Teachers', Utilization, Self Reliant and Global Competitiveness.

INTRODUCTION

Twenty-first century is encompassed with novel ideas around the globe. Day after day, new ideas that welcome development in every country emanate for global competiveness. To nurture creativity and nation building in a country, the role of the teacher becomes sine qua noon to self reliance towards global competitiveness. Teachers are the knowledge transformers of development of the country's economy. Teachers are instructors and facilitators who set learning outcomes for the learners and guide the learners to acquire new ideas or knowledge. For teachers to have full grasp of their profession, it is expedient that Ministry of Education as a regulatory body spell out the nitty-gritty of the profession and regulate it. At present in Nigeria, teaching is yet to be practiced as a profession despite the efforts of The Teachers Registration Council of Nigeria (TRCN). There is still an on-going debate on its professionalism. Ekwueme and Ogbondah (2005) posited that teaching in Nigeria is not a profession but a job that Jack, Tom and Harry can easily engage themselves. Currently, as 21^{st} century is plagued with global

unemployment. Teaching should be handled by qualified and competent teachers that will focus on making the learners self reliant in order to fit in and compete globally with their counterparts. Contemporarily, it is sad that many Nigerians without teaching certification walk into the classroom and talk to their audience with the mindset of teaching. Consequent upon this, the nation persists to experience educational upheaval because the bulk of the educational centres in Nigeria are owned or used by untrained personnel for the content delivery. This has become a topical issue. Supporting this statement is Obanya 2002) who opined that it is very difficult to distinguish between those teaching and cheating in the classroom. There are features expected of a trained teacher. Once there is no vivid trace of these, it becomes obvious to distinguish between teaching in its proper sense and such other narrow concepts like training, indoctrinating, drilling. The fact is that a lot of people who claim to be teachers at our various institutions of learning are not actually teachers and what they do in the class may fall short of teaching in its technical sense.

In pursuit to promote self reliant education for global competitiveness and end unemployment, insecurity and other eco-social vices, the Nigerian secondary education system curriculum have promulgated the extension beyond literacy and numeracy to functional education. Functional education according to Onyeukwu, Uka and Ufot (2014) is education that is useful and practical rather than being content cognitive attractive. Assessing the role of a teacher, it is said to be believed that teachers constitute the most critical factors in the education process. Their qualities have serious implications for the education system towards global competiveness. This has become most imperative in view of the implementation of the Universal Basic Education programme (UBEP). The implication of this is that to ensure quality education for self reliant towards global competitiveness, the teachers must be qualitatively adequate, adequately educated and professionally prepared (Obanya 2002). Fadipe (2003) revealed that a teacher is not only responsible for building the visible learners in the classroom but the entire society. Akhyak and Idrus (2013) stated that there is no education without the presence of teachers. They further stressed that teachers are determinants of the direction and learning system including the curriculum, facilities, forms and patterns, and efforts to help how students learn properly and correctly in order to access knowledge and values for life. They further noted that a teacher is a "guru" who acts as a guide to students towards the better future of students.

There is much interest and clamouring on capability and self reliant towards global competitiveness in recent times. These clamouring do not go well with teaching profession. Ushie (2014) opined that there has been clamour recently for accountability and relevance to education by both the layman and professionals. He stressed that this clamour is based on the fact that people want what is taught to be useful to both the individual, general community and the nation at large. This places much expectation on the teacher as he is the pivot of the teaching and learning processes. Ayodele and Oyewole (2012) described teachers as the main determinant of quality education. They constitute a major drive in the production process and in the determination of the output (Oyewole 2008). A nation where teachers are apathetic, uncommitted, uninspired, lazy, unmotivated, immoral, antisocial is doomed. Every teacher must be sound in morality and competent in lesson delivery.

Taking the relevance of instructional materials into consideration for teaching towards students self reliant and global competiveness, it would be appropriate to state that the teachers accessibility, frequent and competent use of instructional materials in education should be a must in every instructional delivery.

Purpose of the study Research questions 1. What is the influence of untrained teachers' accessibility of instructional materials?

2. What is the influence of untrained teachers' competence in utilization of instructional material?

3. What is the influence of untrained teachers' frequent utilization of instructional materials?

Research hypotheses

1. There is no significant influence of untrained teachers' accessibility of instructional materials for utilisation on students' self reliance.

2. There is no significant influence of untrained teachers' competence in utilization of instructional material on students' self reliance.

3. There is no significant influence of untrained teachers' frequent utilization of instructional materials on students' self reliance

Research method

This study adopted descriptive design due to its appropriateness in determining the common characteristics of a particular individual, or of a group. This research design assisted the researchers to gather data on untrained teacher's variables on instructional materials such as, their accessibility, frequence and competence on the utilization of instructional materials for self reliant education. The study was carried out in Port Harcourt City Local Government Area with an acronym (PHALGA) in Rivers State in Southern Nigeria. The population of the study comprised 177 teachers from Universal Basic Education (UBE) Public Secondary Schools in Phalga of Rivers State, Rivers State Universal Basic Education Information Management System (RSUBEIMS).

RESULTS AND DISCUSSION

In this chapter, the result of data analysis is presented and discussed. It is organized under research questions, hypotheses testing, and summary of findings and discussion of findings. Item by Item Analysis of Responses of Untrained Teachers on Accessibility of Instructional Materials

Table 1:

Mean Responses of Untrained Teachers on Accessibility of Instructional Materials

S/No	Accessibility of Instructional Materials	N	2016 X	2017 X	2018 X	Three Years X	Decision
1	Lack of laboratory equipments hinders me from using instructional materials in teaching Mathematics	177	2.10	2.12	2.02	2.08	Disagree
2	The school leadership styles makes it difficult to access the school instructional materials or laboratory	177	2.06	1.92	2.21	2.06	Disagree
3	Access to my school resource room is restricted to the teaching staff only	177	2.56	2.92	2.94	2.81	Agree
4	It's often difficult to get an instructional materials in schools	177	2.63	2.72	2.62	2.66	Agree

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5	School instructional materials are often kept in the principal's office	177	2.67	2.47	2.86	2.67	Agree
6	I often finds it easy accessing the right equipment for Mathematics	177	2.68	2.89	2.64	2.74	Agree
	Grand Mean	177	2.45	2.51	2.56	2.51	Agree

As shown in table 1, untrained teachers disagreed on lack of laboratory equipment hinders me from using instructional materials in teaching Mathematics and school leadership styles makes it difficult to access the school instructional materials or laboratory in the three years including the average of the three years. They agreed on access to my school resource room is restricted to the teaching staff only, it's often difficult to get an instructional material in schools, school instructional materials are often kept in the principal's office and I often find it easy accessing the right laboratory equipment in my School Mathematics Laboratory in the three years including the average of the three years. From the grand mean, it can be inferred that untrained teachers agreed to accessibility of instructional materials in the three years including the average of the three years.

Item by Item Analysis of Responses of Untrained Teachers' Competency on the Use of Instructional Material.

Table 2:

Mean Responses of Untrained Teachers' Competency Use of Instructional Material

S/No	Untrained Teachers' Competency on theUse of Instructional Material	N	2016 X	2017 X	2018 X	Three Years X	Decision
7	Mathematics instructional materials are difficult to handle	177	2.29	2.38	2.54	2.40	Disagree
8	There is no enough time to teach Mathematics topics using instructional materials	177	2.63	2.69	2.76	2.69	Agree
9	Students get bored when topic involves the use of instructional materials	177	3.02	2.35	2.76	2.71	Agree
10	The school authority's mandate for using instructional materials in teaching Mathematics makes teaching tedious	177	2.85	2.54	2.84	2.74	Agree

11	The complex nature of Mathematics makes it difficult to use instructional materials in teaching	177	2.13	1.86	2.15	2.05	Disagree
12	The Mathematics laboratory attendants should select and make ready suitable instructional materials available for every lesson	177	1.90	1.79	1.94	1.88	Disagree
	Grand Mean	177	2.47	2.27	2.50	2.41	Disagree

As shown in table 2, untrained teachers disagreed on Mathematics instructional materials are difficult to handle in 2015 and 2016 including average for the three years but agreed in 2018. They also disagreed on complex nature of Mathematics makes it difficult to use instructional materials in teaching and Mathematics laboratory attendants should select and make ready suitable instructional materials available for every lesson. They agreed students get bored when topic involves the use of instructional materials in 2016 and 2018. They also agreed on no enough time to teach Mathematics topics using instructional materials and school authority's mandate for using instructional materials in teaching Mathematics makes teaching tedious in the three years including the average of the three years. From the grand mean, it can be inferred that untrained teachers agreed to their being Competent in the use of instructional material in 2018 but disagreed in the rest years including the average of the three years

Item by Item Analysis of Responses of Untrained Teachers' Frequent Use of Instructional Materials

Table 3:

Mean Responses of Untrained Teachers' Frequency Use of Instructional Materials.

S/No	Untrained Teachers' Frequency Use of Instructional Materials	Ν	2016 X	2017 X	2018 X	Three Years X	Decision
13	The abstract nature of Mathematics subject makes me use teaching materials frequently	177	1.89	2.20	2.08	2.06	Disagree
14	The directives of always teaching Mathematics with instructional materials where necessary is appropriate.	177	2.01	2.29	2.07	2.12	Disagree
15	All teachers are often to teach with the use of instructional materials	177	1.65	2.10	2.09	1.95	Disagree

16	Teachers should improvise instructional materials in absence of anyone for use in teaching	177	1.99	2.19	2.43	2.20	Disagree
17	I always make use of the Mathematics instructional materials in teaching Mathematics	177	1.90	2.19	2.57	2.22	Disagree
18	The school library and laboratory are enough to teach abstract lesson	177	2.01	2.45	2.29	2.25	Disagree
	Grand Mean	177	1.91	2.24	2.26	2.14	Disagree

As shown in table 4, untrained teachers disagreed on the abstract nature of the Mathematics subject makes me use teaching materials frequently, the directives of always teaching Mathematics with instructional materials where necessary is appropriate, all teachers are often to teach with the use of instructional materials, teachers should improvise instructional materials in absence of anyone for use in teaching tedious in the three years including the average of the three years. They disagreed on I always make use of the Mathematics laboratory materials in teaching Mathematics in 2016 and 2017 including the average of the three years but agreed in 2018. They also disagreed in all the three including average of the three school library and laboratory are enough to teach abstract lesson. From the grand mean, it can be inferred that untrained teachers disagreed in all the three years including the average of the three years to their frequent use of instructional material.

Research Questions

This section answers the research questions using regression analysis.

Research Question One

What is the influence of untrained teachers' accessibility of instructional materials? Table 4

Regression Analysis of the Influence of Untrained Teachers Accessibility of Instructional Materials for Utilisation in 2016, 2017 and 2018.

Variable	R	R Square
Untrained teachers' accessibility of instructional materials utilisation in 2016	s for .28	.08
Variable	R	R Square
Variable Untrained teachers' accessibility of instructional materials	R	R Square

Variable	R	R Square	

Untrained teachers' accessibility of instructional materials	for	
utilisation in 2018	.38	.15

As shown in table 4, the regression coefficients for 2016, 2017 and 2018 are .28, .35 and .38 respectively. The table also showed the regression coefficients squared for 2016, 2017 and 2018 as .08, .12 and .15 respectively. It can be inferred from the result that 8%, 12% and 13% of the variation in students' performance can be attributed to the influence of the independent variable (untrained teachers' accessibility) in the year 2016, 2017 and 2018 respectively. It could also be infer from the result the accessibility increased each year thought very low.

Research Question Two

What is the influence of untrained teachers' competence in utilization of instructional material?

Table 5

Regression Analysis of the Influence of Untrained Teachers Competence in Utilization of Instructional Material on Students' Academic Performance in 2016, 2017 and 2018.

Variable	R	R Square
Untrained teachers' competence in utilisation of instructional		
materials on students' performance in Mathematics	.47	.23

Variable	R	R Square
Untrained teachers' competence in utilisation of instructiona materials on students' performance in Mathematics	¹ .28	.08
Variable	R	R Square

As shown in table 5, the regression coefficients for 2016, 2017 and 2018 are .47, .28 and .57 respectively. The table also showed the regression coefficients squared for 2016, 2017 and 2018 as .23, .08 and .33 respectively. It can be inferred from the result that 23%, 8% and 33% of the variations in students' performance in 2016, 2017 and 2018 respectively can be attributed to the influence of the independent variable (untrained teachers' competence). From the result it can be seen that competence was average in 2016, later low in 2017 and high in 2018.

Research Question Three

What is the influence of untrained teachers' frequent utilization of instructional materials?

Table 6

R

untrained	teachers'	frequent	utilization	of	instructional		
materials of	on students'	self relian	ce			.19	.03

Regression Analysis of the Influence of Untrained Teachers Frequent Utilisation of Instructional Materials on Students' Performance in 2016, 2017 and 2018.

Variable						R	R Square
					instructional	• •	
materials of	on students'	academic	performance	in N	Aathematics	.28	.08

Variable						R	R Square
					instructional	• •	
materials c	on students'	academic	performance	in N	Aathematics	.28	.08

As shown in table 6, the regression coefficients for 2016, 2017 and 2018 are .19, .28 and .28 respectively. The table also showed the regression coefficients squared for 2016, 2017 and 2018 as .03, .08 and .08 respectively. It can be inferred from the result that 3%, 8% and 8% of the variations in students' performance in 2016, 2017 and 2018 respectively can be attributed to the influence of the independent variable (untrained teachers' frequent utilisation of materials). From the result it can be seen that untrained teachers' frequent utilisation of materials was low from 2016 to 2018.

Testing the Hypotheses

In this section, the hypotheses formulated to guide the study were tested.

Hypothesis One

There is no significant influence of untrained teachers' accessibility of instructional materials for utilisation on students' self reliance.

Table 7:

Analysis of the Regression Coefficient of Untrained Teachers' Accessibility of Instructional Materials for Utilisation on Students' Performance in Mathematics Using F-statistics in 2016, 2017 and 2018

Source of Variation	Sum of		Mean		Sign. at	Decision
	Squares	df	Square	F	P<.05	
Regression	6.88	1	6.88	14.84	.00	*
Residual	81.06	175	0.46			
Total	87.93	176				

*= significant at .05 level of significance.

Source of Variation	Sum of		Mean		Sign. at	Decision
	Squares	df	Square	F	P<.05	
Regression	10.36	1	10.36	24.55	.00	*
Residual	73.85	175	0.42			
Total	84.22	176				

*= significant at .05 level of significance.

Source of Variation	Sum of		Mean		Sign. at	Decision
	Squares	df	Square	F	P<.05	
Regression	13.17	1	13.17	30.07	.00	*
Residual	76.67	175	0.44			
Total	89.84	176				

*= significant at .05 level of significance.

Table 7 showed that the calculated P-values (.00), (.00) and (.00) for 2016, 2017 and 2018 respectively are less than the significance level (.05). Therefore, the null hypothesis is rejected. This implies that there exists significant influence of untrained teachers' accessibility of instructional materials for utilisation on students' performance in Mathematics. Hypothesis Two

There is no significant influence of untrained teachers' competence in utilization of instructional material on students' self reliance.

Table 8:

Analysis of the Regression Coefficient of Untrained Teachers' Competence in Utilization of Instructional Material on Students' Self reliance in 2016, 2017 and 2018

Source of Variation	Sum of		Mean		Sign. at	Decision
	Squares	df	Square	F	P<.05	
Regression	20.10	1	20.10	50.45	.00	*
Residual	69.74	175	0.40			
Total	89.84	176				

*= significant at .05 level of significance.

Source of Variation	Sum of Squares	df	Mean Square	F	Sign. at P<.05	Decision
Regression	6.78	1	6.78	15.32	.00	*
Residual	77.44	175	0.44			
Total	84.22	176				

*= significant at .05 level of significance.

Source of Variation	Sum of Squares	df	Mean Square	F	Sign. at P<.05	Decision
Regression	29.00	1	29.00	86.10	.00	*
Residual	58.94	175	0.34			
Total	87.93	176				

*= significant at .05 level of significance.

Table 10 showed that the calculated P-values (.00), (.00) and (.00) for 2016, 2017 and 2018 respectively are less than the significance level (.05). Therefore, the null hypothesis is rejected. This implies that there exists significant influence of untrained teachers' competence in utilization of instructional material on students' academic performance in Mathematics. Hypothesis Three

There is no significant influence of untrained teachers' frequent utilization of instructional materials on students' self reliance.

Table 9:

Analysis of the Regression Coefficient of Untrained Teachers' Frequent Utilization of Instructional Material on Students' self reliant in 2016, 2017 and 2018

Source of Variation	Sum of		Mean		Sign. at	Decision
	Squares	df	Square	F	P<.05	
Regression	2.88	1	2.88	6.20	.01	*
Residual	81.34	175	0.47			
Total	84.22	176				

*= significant at .05 level of significance.

Source of Variation	Sum of		Mean		Sign. at	Decision
	Squares	df	Square	F	P<.05	
Regression	6.86	1	6.86	14.47	.00	*
Residual	82.98	175	0.47			
Total	89.84	176				

*= significant at .05 level of significance.

Source of Variation	Sum of		Mean		Sign. at	Decision
	Squares	df	Square	F	P<.05	
Regression	7.09	1	7.09	15.34	.00	*
Residual	80.85	175	0.46			
Total	87.93	176				

*= significant at .05 level of significance.

Table 10 showed that the calculated P-values (.01), (.00) and (.00) for 2016, 2017 and 2018 respectively are less than the significance level (.05). Therefore, the null hypothesis is rejected. This implies that there exists significant influence of untrained teachers' frequent utilization of instructional materials on students' self reliance

Discussion of Findings

In this section, the results of the research findings are discussed according to the research hypotheses.

Influence of Untrained Teachers Accessibility of Instructional Material for Utilisation on students' self reliance.

The findings on the influence of untrained teachers' accessibility of instructional materials for utilisation on student's students' self reliant indicated a low percentage influence for the three years which were significant. The findings could be attributed to the importance of accessing instructional materials. In a given situation of availability of instructional materials, where they are not accessible by teachers, the teachers may not be able to use and present them to students thereby leading to non-concretization of their lesson hence, may result to students not understanding the concepts. This is why Adeoye and Popoola (2011) noted that for learning to take place learners must have access to necessary information materials and resources. They have to interact with tangible and intangible resources and institutions to ensure some levels of performance. This is also affirmed by Mutai (2006) who asserted that academic achievement illustrates per excellence the correct use of these materials. The finding of the study is in line with the finding of Tuimur and Chemwei (2015), who found that teachers lacked sufficient instructional materials for effective teaching of the topic. The finding of the study is also in line

with that of Asogwa, Onu and Egbo (2013), who revealed that 12 challenges were encountered by teachers in accessing and utilizing available instructional materials in fish production in senior secondary schools in Benue State.

Influence of Untrained Teachers' Competence in Utilisation of Instructional Material on Students' self reliance

The findings on the influence of untrained teachers' competence in the utilisation of instructional materials on student's performance in Mathematics indicated a low percentage influence in 2016 and 2017 but moderate influence in 2018 which were significant. From the findings of the study, it could be stated that for the performance of students to be enhance more of the learners' senses have to be stimulated other than hearing alone. The teachers' competency may have played great part as instructional materials have to meet the learning objectives, be validated and their impact be evaluated. It is the teacher and not the materials that produce exciting programmes for the students. No material is entirely self-teaching; they all require a teacher to set the stage for learning to take place because materials of instruction can be no better than the teachers who use them. This is why Mutai (2006) asserted that academic achievement illustrates per excellence the correct use of instructional materials. Affirming this, Gistarea (2013) lamented that ineffective utilization of the available instructional materials is a major concern to the society. He opined that for a given instructional procedure to achieve desired objectives, it must be properly harnessed through adequate and proper use of instructional facilities. The findings of the study is in line with that of Murat (2016)_who found moderate-to-high levels of positive and statistically significant correlations between the sub dimensions of pre service teachers' teaching competencies. The findings of the study is also in line with that of Ido (2008), who took a systematic look at the issue of teachers' effectiveness and explain it as being the function of three variables, the quality of motivation of the teacher, the method use by the teachers and adequacy of facilities and equipment. Given this to be correct, if none of these functions could be attained, it would definitely affect the output of teachers in public secondary schools.

Influence of Untrained Teachers' Frequency use of Instructional Material and Students' self reliant

The findings on the influence of untrained teachers' frequency of use of instructional materials on student's performance in Mathematics indicated a low percentage influence which was significant. This could be attributed to the teachers being untrained and the fear of the wrong use of the instructional materials. This affirms Jotia and Matlale (2011), who evaluated the frequency of use of instructional materials in the teaching of social studies in primary schools in Botswana and found that teachers' use of instructional materials was very inadequate and this invariably had impact on pupil's performance in primary school leaving certificate examination. The finding of the study is in line with that of Mehadi (2010), who found that the majority of the teachers do not frequently use media in the actual teaching-learning situation. It is also in line with that of Fakonogbon, Olanrewaju and Soetan (2015), who found that lecturers use instructional media less frequently.

Summary

This study investigated untrained teachers utilization of instructional materials and students' self reliance in Port Harcourt metropolis of Rivers State, Nigeria. The study specifically examined the relationship between available instructional materials for untrained teacher's utilization and student's performance in Mathematics, the relationship between accessibility of instructional materials by untrained teacher's utilization and student's performance, relationship between untrained teachers' competence in utilization of instructional material and students' academic performance, the relationship between untrained teachers' frequent of utilization of instructional materials

Conclusion

Based on the findings of this study, it could be concluded that untrained teacher's utilisation of instructional material relates to students performance positively and given the access to instructional materials could positively relate to students' performance given their competence and qualification.

Recommendations

Based on the findings of the study, the following recommendations were made;

- (1) Adequate instructional materials should be provided by Ministry of Education and other educational bodies.
- (2) School heads should avail teachers especially untrained teachers the opportunity to access instructional materials for teaching.
- (3) School heads and departmental heads should check teachers regularly to ensure the frequent use of instructional materials which could there enhance teachers' competence.
- (4) The government and other organisations should organise workshop for untrained teachers in order to boost their competence in the use of instructional materials.

REFERENCES

Akhyak M. and Idrus Y. (2013). Implementation of teacher's pedagogy competence to optimizing learner's development in public primary school in Indonesia. *International Journal of education and research* 1(9), 1 - 10.

Obanya Pai (2002). Revitalizing Education in Africa. Ibadan St Stirling-Horden Publishers.

Faladipe J.O. (2003). Quality control in education: the teacher factor in Technical Education. Ajayi and J. Faladipe (eds) Skills Improvement programme for effective performance of teachers in Nigerian schools. A publication of national institute for educational planning and administration (NIEPA), Ondo. 128-143.

Federal Government of Nigeria (2004). National Policy on Education. Lagos: NERDC Press.

Federal Ministry of Education (FME) National Policy on Education (NPE 2004).

Ushie (2014). Components of Instructional System Design. Calabar. University of Calabar Printing Press. Calabar.

Onyeukwu, F.O.Uka, J.A. Ufot, S.J. (2014), education for all, functionality and challenge: A time for reflection. Journal of Education, 7 (1):145-153