



Assessment of Teachers' Competence for Implementing Senior Secondary School Geography Curriculum in Mangu Local Government Area, Plateau State, Nigeria

Dickson, S. Dakur, Nanfwang, P. Muwus
Department of Science and Technology Education,
Faculty of Education,
University of Jos, Plateau State Nigeria
Department of Community Health,
Mwaghavul College of Health Technology Pushit,
Mangu Local Government Area, Plateau State Nigeria

ABSTRACT

The study assessed teachers' competence in implementing the senior secondary school geography curriculum in Mangu Local Government Area of Plateau State, Nigeria. The study specifically assessed geography teachers' competence in respect of lesson plan and delivery, mastery of subject matter, effective use of instructional materials and qualification. The descriptive survey research design was adopted, while a sample of 44 geography teachers was used for the study. Four research questions was answered, and one hypothesis tested during the study. A structured questionnaire on geography teachers' competence for implementing the geography curriculum was used for data collection. The reliability of the instrument was established at .86 using Cronbach alpha method. The data collected for the study was analyzed using mean, standard deviation, frequency count, simple percentage and t-test of independent samples. Findings of the study revealed that the competency level of most geography teachers in implementing the curriculum was moderate. The study also revealed that most geography teachers had low mastery of the content of the curriculum and were ineffective in the use of instructional materials. The study further showed that most of the geography teachers did not have the qualification for teaching geography at the senior secondary school level. It was also found that teachers who had the qualification were more competent in implementing the curriculum than their unqualified counterparts. A few recommendations were made in line with the findings of the study.

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INTRODUCTION

Geography is an integral part of the national senior secondary school curriculum of Nigeria, aimed at addressing economic, socio-cultural, political and environmental problems of the country. Geography is significant in nation building and therefore remained a core subject in the senior secondary school curriculum (NERDC, 2007). The desire to make geography at the senior secondary school level more appealing

and functional in Nigeria, the 1985 geography curriculum that was in used was revised in 2007 and implemented in 2011. The major themes in the revised curriculum include: local geography, earth and the solar system, environment and its resources, regional geography of Nigeria, map reading and interpretation, economic and human geography and geographic information system (GIS). These were believed to be appropriate for addressing Nigeria's school and social needs.



This would however not be possible without harnessing the required factor of effective curriculum implementation.

The curriculum of any subject remains a plan and useless, unless it is put into action through effective implementation. Curriculum implementation involves the process of putting the planned curriculum into action. Curriculum implementation (Amadi, 1999) is the practical application of the curriculum as a set of proposal or programs of intended learning so that the goals of the plan are realized and guaranteed. Amadi stressed that curriculum implementation is the settings up of learning opportunities by teachers aimed at making learners acquire the desired knowledge, skills, values and attitudes. This definition implies that teachers are key implementers of the curriculum. Thus, how well the curriculum is implemented depends on the teachers. As there are many teachers, so would there be many variants of implementations of the planned curriculum. Fwang'le (2016) therefore states that teachers who interpret the curriculum well make the curriculum effective and useful, while teachers who interpret it wrongly will not only mar the curriculum but will destroy the lives entrusted in their care.

The basic requirements for curriculum implementation as noted by Kabang, Josiah and Kamji (2020) are teacher quality and enabling environment. Curriculum implementation to Fwang'le should not be hurried over, but it requires a careful study, training and retraining of teachers, to ensure that the teacher adopts the appropriate teaching methods and materials to guide the students' learning. Fwang'le stressed that the teacher should also be knowledgeable in lesson note writing, and above all has a good knowledge of the students. This implies that the teacher should possess certain professional skills or knowledge that will enable him or her carries out his/her duty efficiently and effectively. These skills and knowledge constitutes the competency of the teacher.

Teacher's competency (Aina & Olanipekun, 2015) is difficult to define since there has not been a consensus on what measure quality teacher. The authors state that it is possible to measure some teacher's attribute like interaction with student, teaching strategy,

motivation, pedagogical content knowledge and classroom management through qualitative research approach; which could in a long way determine the teacher's effectiveness/competency. Stronge, Ward, and Grant (2011) identified four dimensions that can be used to characterize an effective and competent teacher. These are instructional effectiveness, uses of assessment for student learning, positive learning environment and personal quality of the teacher. This definition strongly suggest that a competent geography teacher should be professionally trained, vast and deeply rooted in geographic knowledge, effective in teaching methods, classroom management, use of instructional materials, lesson planning and evaluation of students' learning outcome among others. The quality of every geography teacher is determined by his/her competency level, measured by the quality of students' learning outcome, since no educational system can rise above the standard of its teachers.

Teachers' qualification constitutes part of their competency in carrying out their teaching work. It is a particular training or type of experience or knowledge teachers possess to make them well equipped for teaching. Such training include formal education, experience, knowledge of subject matter, pedagogical studies, duration of training, certificate/licensing and professional development (Zuzovsky, 2009). The author asserts that teacher's qualification has a positive relationship with students' academic achievement. Ademulegun as alluded by Aina and Olanipekun (2015) posits that students taught by more qualified and experienced teachers perform better than those taught by less qualified but experienced teachers. This suggests that qualification is as strong determiner of effective teaching. However, the qualification of the teacher must be justified by good knowledge of the subject matter and pedagogical skills. This is because, as pointed by Prasertcharoensuk, Somprach, and Ngang, (2014), if the teacher acquire higher level of knowledge and qualification, students learning achievement seems to improve. More so, the teacher should be vast and effective in pedagogy with the ability to employ meaningful variety in



teaching and learning to cater for individual differences among students (Muwus, 2019; Aina & Olanipekun, 2015). The minimum educational qualification for the teaching of senior secondary school geography as contained in National Policy on Education (2013) is bachelor degree in geography education or single honour bachelor degree in geography and postgraduate diploma in education.

Effective teaching also requires that the teacher is able to know how to select and use a variety of instructional material in such a way that the learning experiences offered to students is all encompassing by impacting on their five sense. Thus, the more the teacher uses instructional aids that appeals to the senses of hearing, seeing, feeling, testing and smelling, the more the lesson becomes attractive, interesting and learning becomes permanent. One of the criteria for the selection of instructional materials as stated by Ema and Ajayi (2006) is teacher's capability. Any instructional material chosen by a teacher should be within the capability of the teacher to handle and effectively use it to achieve the lesson's objectives.

Teachers' incompetence in the implementation of the Geography curriculum could have resulted to students' poor achievement in the subject. In recent times, the achievement of geography students in SSCE conducted by WAEC and NECO had been a matter concern to geographers as observed by Khalil, Sabiu and Mohammed (2015). Similarly, Olodu as cited in Muwus and Dakur (2020) posits that less improvement in the general performance of candidates in SSCE conducted by WAEC and NECO is an observable fact. As an external examiner in WASSCE and NECO from 2009 to 2012, Olodu (2012) affirms that the performance of students in geography is generally poor and lower than those of the previous years. What could have been the reason for the poor achievement? In an effort to answer this, Ezema (2014) pointed out that over the years; the teaching of geography in secondary schools in Nigeria has been criticized for not meeting the needs of the learner and the interest of the nation. The author added that the teaching of geography was occupied by some quacks and unqualified teachers who cannot

deliver both in terms of content and methodology. Several factors may be responsible for this situation. For instance, Sofowara and Egbedokun (2010), Ezema (2014) and Khalil, Sabiu and Mohammed (2015) noted that poor teaching methods, inadequate and poor handling of instructional materials, teachers quality and quantity, nature of geography, inadequate time, lack of geography rooms, teachers' and students' attitude are responsible factors. The researchers however, aimed to assess teachers' competence in implementing the senior secondary school geography curriculum in relationship to this phenomenon.

Purpose of the Study

The purpose of the study was to assess teacher competency in implementing the senior secondary school geography curriculum in Mangu Local Government Area of Plateau State, Nigeria. Specifically, the study seeks to assess Geography teachers' competence in the following:

1. Lesson preparation and delivery.
2. Mastery of the content of the senior secondary school geography curriculum.
3. Use of instructional materials for teaching geography.
4. Qualification for teaching geography in senior secondary school schools.

Research Questions

The study was guided by the following research questions:

1. What is the competency level of geography teachers in lesson preparation and delivery?
2. To what extent do geography teachers master the content of senior secondary school geography curriculum?
3. To what extent are geography teachers effective in the use of instructional materials for teaching geography?
4. What are the qualifications of teachers that implement the senior secondary school geography curriculum?



Hypothesis

1. There is no significant difference between qualified and unqualified geography teachers on competency to implement the senior secondary school geography curriculum.

METHODOLOGY

The study adopted descriptive survey research design. A sample of 44 geography teachers in 23 private and 21 public senior secondary schools in the study area was used for the study. A structured questionnaire for data collection. The questionnaire consisted of sections A and B. Section A seeks to obtain information on geography teacher's personal data, while section B seeks to elicit information variables relating on teachers' lesson preparation and delivery mastery of geography content, use

of instructional materials, and qualification. Three experts, one in Geography and Planning, and two in Educational Test and Measurement validated the instrument. While its reliability was measured using Cronbach alpha method which yielded the co-efficient of .86. The instrument was administered using the face to face meeting with the respondents. Research questions 1, 2 and 3 were answered using descriptive statistics of mean and standard deviation, while frequency count and simple percentage were used to answer research question 4. The hypothesis was tested using t-test of independent samples.

RESULTS

Research Question 1: What is the competency level of geography teachers in lesson preparation and delivery?

Table 1: Summary of Analysis of Geography Teacher's Competence in Lesson Preparation and Delivery.

S/N	Measures of Competency	\bar{X}	SD	Level of Competence
1	Teaching preparation	2.85	0.99	Moderate
2	Lesson strategies	2.86	1.02	Moderate
3	Classroom management	2.99	1.00	Moderate
4	Management of students thinking	3.11	1.14	High
5	Students activities	3.23	1.14	High
6	Teacher classroom evaluation	2.84	1.17	Moderate
Overall Teachers competence		2.98	1.07	Moderate

$\bar{X} < 2.5$ = Low, \bar{X} 2.5 to 2.9 = Moderate, $\bar{X} \geq 3.0$ = High using 5-point Likert scale.

Table 1 revealed that teachers demonstrated moderate competency in teaching preparation (\bar{X} = 2.85), lesson strategies (\bar{X} = 2.86), classroom management (\bar{X} = 2.99), and classroom evaluation (\bar{X} = 2.84). While high level of competency was shown in management of students thinking (\bar{X} = 3.11) and students activities (\bar{X} = 3.23). Overall teachers competency

was moderate (\bar{X} = 2.99, SD = 1.03). This therefore implies that the competency level of geography teachers in lesson preparation and delivery was moderate.

Research Question 2: To what extent do geography teachers master the content of senior secondary school geography curriculum?

Table 2: Summary of Analysis of Geography Teachers Mastery of Senior Secondary School Curriculum

S/N	Geography Content	\bar{X}	SD	Mastery Level
1	Local geography	1.9	0.8	Low
2	Solar system	2.9	1.9	Moderate
3	Earth's rotation and revolution	3.1	1.1	High
4	Longitudes and latitudes	2.2	1.2	Low
5	Structure of the earth	3.2	1.2	High
6	Rocks	3.4	0.4	High



S/N	Geography Content	\bar{X}	SD	Mastery Level
7	Mountains, plateaux and plains	2.9	1.9	Moderate
8	Weather and climate	2.1	1.2	Low
9	External processes and landforms	2.6	0.8	Moderate
10	Environment and its resources	3.0	1.0	High
11	Environmental problems	2.8	0.9	Moderate
12	Environmental conservation	2.8	1.2	Moderate
13	Earth's internal processes	2.7	1.3	Moderate
14	Denudational processes	2.8	1.1	Moderate
15	Weathering	2.4	1.4	Low
16	Mass movement	2.8	1.2	Moderate
17	Climate change	2.0	1.8	Low
18	Satellite remote sensing	1.5	1.8	Low
19	Geographic Information System	1.2	1.4	Low
20	Geo-political issues	1.9	1.9	Low
21	Basic concepts in map reading	2.3	0.8	Low
22	Map distance	1.3	1.8	Low
23	Map reduction and enlargement	1.0	1.6	Low
24	Interpretation of cultural and physical features	1.0	0.7	Low
25	Direction and bearing	1.2	0.8	Low
26	Representation of relief forms	1.2	0.8	Low
27	Location and position of Nigeria	3.5	0.9	High
28	Physical setting of Nigeria	3.5	1.6	High
29	Population of Nigeria	3.0	1.9	High
30	ECOWAS	2.5	0.2	Moderate
31	Resources of Nigeria	2.6	0.6	Moderate
32	Agriculture in Nigeria	3.0	0.7	High
33	Transport and communication in Nigeria	3.0	0.2	High
34	Manufacturing industries in Nigeria	2.8	0.9	Moderate
35	Commercial activities in Nigeria	2.5	1.8	Moderate
36	World transportation	3.4	0.8	High
37	World industries	3.4	1.9	High
38	World settlement	2.8	1.0	Moderate
39	World population	2.9	0.2	Moderate
40	World trade	2.8	0.1	Moderate
	Cumulative mean of teachers mastery	2.4	1.0	Low

Note: $\bar{X} < 2.5$ = Low, \bar{X} 2.5 to 2.9 Moderate, $\bar{X} \geq 3.0$ = High, using 5-point Likert scale.

Data in Table 2 indicates that out of the 40 items on the mastery level of geography teachers of the curriculum, 13 items were lowly mastered by the teachers as shown from their means which were lower than 2.5, 16 items were moderately mastered with their means between 2.5 and 2.9, 11 items were highly mastered with means of ≥ 3.0 and the general mastery of the

content was low as indicated by the cumulative mean of 2.4. This means that teachers had low mastery of the content of the senior secondary school geography curriculum.

Research Question 3: To what extent are geography teachers effective in the use of instructional materials for teaching geography?



Table 3: Summary of Analysis of Geography Teachers Effectiveness in the use of Instructional Materials

S/N	Instructional Material	\bar{X}	SD	Level of effectiveness
1	Rock Samples	2.27	0.87	Low
2	Computer system	1.93	0.63	Low
3	Global Positioning System	0.00	0.00	Low
4	Digitizer	1.05	0.30	Low
5	Multimedia CD on GIS	1.09	0.42	Low
6	Air photos	1.14	0.51	Low
7	Maps	3.68	0.64	High
8	GIS software	1.00	0.58	Low
9	Scanner	1.20	0.67	Low
10	Printer	1.89	1.13	Low
11	Satellite images	1.00	0.00	Low
12	Posters	3.30	1.17	High
13	Documentary Films	1.18	0.58	Low
14	Diagrams	3.32	0.83	High
15	Globe	3.89	1.04	High
16	Atlas	3.00	0.52	High
17	Rain guage	1.23	1.82	Low
18	Wind vane	1.53	0.70	Low
19	Barometer	0.00	0.21	Low
20	Anemometer	1.45	1.00	Low
21	Thermometer	2.50	1.33	Moderate
22	Hygrometer	1.43	0.34	Low
23	Evaporemeter	0.00	0.05	Low
24	Mathematical Sets	2.25	1.01	Low
25	Gunters chain	0.00	0.30	Low
Cumulative mean of teachers effectiveness		1.70	0.67	Low

Note: $\bar{X} < 2.5$ = Low, \bar{X} 2.5 to 2.9 = Moderate, $\bar{X} \geq 3.0$ = High, using 5-point Likert scale.

Data in Table 3 indicates that out of the 25 instructional materials for the teaching of geography, teachers showed high effectiveness in the use of 5, moderate in the use of 1 and low effectiveness in the use of 19. The cumulative mean score of teachers effectiveness in the use of instructional materials is low (1.70) and thus

indicated that teachers are ineffective in the use of instructional materials.

Research Question 4: What are the qualifications of teachers that implement the senior secondary school geography curriculum?

Table 4: Frequency and Percentage of Geography Teacher's Qualifications

Qualification	Frequency	Percentage (%)	Category
NCE	27	61.4	Unqualified
B.Sc.	1	2.3	(28) 63.7%
B.Sc. Ed.	13	29.5	Qualified
B. Sc./PGDE	0	0	(16) 36.3%
M. Sc, (Ed.)	3	6.8	
Total	44	100.0	

Note: Unqualified teachers= NCE and B.S, Qualified teachers: B. Sc. Ed., B. Sc. /PGDE and M.Sc. Ed



Table 4 shows that 27 teachers (61.4%) had NCE, 1 teacher (2.3%) had B.Sc., 13 teachers (29.5%) had B. Sc. Ed, none had B. Sc./PGDE (0%) and 3 teachers (6.8%) had M. Sc. Ed. in geography. Based on this statistics, it means that majority of geography teachers (f=28, 63.7%) that implements the senior secondary

school geography curriculum were not qualified, while only 16 (36.3%) of them were qualified.

Hypothesis 1: There is no significant difference between qualified and unqualified geography teachers on competency in implementing senior secondary school geography curriculum.

Table 5: t-test Analysis of Mean Differences between Qualified and Unqualified Teachers on Competence in Implementing the Senior Secondary School Geography Curriculum.

Group	N	\bar{X}	SD	df	t	p	Decision
Qualified teachers	16	162.75	17.14	42	21.16	0.000	Reject Ho
Unqualified teachers	28	85.54	6.90				

P < 0.05

Table 5 shows that the p-value = 0.000 was less than the level of significance ($\alpha=0.05$) at degree of freedom, df= 42. Therefore, the null hypothesis was rejected and ruled that there was significant difference between the competency level of qualified and unqualified geography teachers on competency of implementation of the senior secondary school geography curriculum, t = 21.16, p < 0.05. Qualified teachers had higher competency ($\bar{X}=162.75$, SD=17.14) compared to unqualified teachers ($\bar{X}=85.54$, SD=6.90). It means that teachers' qualification improves competency in implementing the senior secondary school geography curriculum.

unqualified geography teachers as proven by the study. These findings concur with the assertion of Ezema (2014) who states that the teaching of geography in Nigeria over the years has been occupied by some quacks and unqualified teachers who cannot deliver in terms of content and methodology.

The study also revealed that geography teachers had low level of effectiveness in the use of instructional materials for the implementation of the senior secondary school geography curriculum. This finding was in agreement with the finding of Dhakal (2020) who discovered that geography teachers in Nepal lack the skills in the use of instructional materials.

The study also showed that teachers that implement the senior secondary school geography curriculum were not qualified, as most of them were N.C.E. holders. This finding was in line with the submission of Ajibade and Raheem (2008), Pius (2010), Nuratu (2014) and Khalil, Sabiu and Muhammed (2015). These scholars point out that there is shortage of qualified geography teachers in Nigeria. Omoje (1999) added that in abject disregard of the provision of the National Policy on Education for the restriction of NCE holders to teaching JSS classes, these classes of teachers were often used in teaching geography in the senior classes.

In addition, the finding revealed that there was significant difference between qualified and unqualified geography teachers on competency in implementing the senior

DISCUSSION

Result of the study revealed that geography teachers were incompetent in implementing the senior secondary school geography curriculum. This was evident by their show of incompetency in teaching preparation, lesson strategies, classroom management and teacher classroom evaluation. This finding corroborates Utazi (2015), Aina and Olanipekun (2015), Lamiadiati, Darwin, Sukarman and Purba (2017) and Muwus (2019) who found that the poor grade of students in SSCE geography among other things was attributed to incompetency of geography teachers. Furthermore, it was found that geography teachers had low mastery of the content of the senior secondary school geography curriculum. This could be as a result of high number of

Corresponding author: Dickson, S. D. ✉ dakurdickson@gmail.com ✉ Department of Science and Technology Education, University of Jos.. © 2021, Faculty of Technology Education, ATBU Bauchi. All rights reserved



secondary school geography curriculum, in favour of the qualified geography teachers. This finding conforms to the position of Lamiadiati, Darwin and Sukarman (2017) who asserted that certified teachers are the basis of strong assumptions that teachers have competence, and that, teachers in each educational unit must meet academic qualifications in the subjects they teach at school so that they are called competent for the field of work.

RECOMMENDATIONS

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

1. Government and private school proprietors should organize workshops and seminars to geography teachers towards enhancing effective lesson planning and delivery. This will help in improving teacher competency and improved students performance.
2. Government and private school proprietors should encourage teachers with lower qualification to further their studies through granting of in-service training, improved remuneration and staff welfare package. This will go a long way in improving geography teacher's mastery of content and effective use of instructional materials.
3. Government and private school proprietors should ensure that only academically and professionally qualified geography teachers were employed during recruitment exercise. This will help in reducing the number of unqualified geography teachers.

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