

The Impacts of Senior Secondary Schools' Quality and the Content Validity of Their Geography Tests Items

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Abstract: *The study was aimed at investigating the relationship between school quality and the content validity of their Geography tests items. The study adopted causal comparative descriptive research design. Two research questions and two null hypotheses guided the study. A total of 120 Geography teachers were purposively selected for the study. The data was collected through a validated checklist and questionnaire which gave a reliable index of 0.73. Data was analyzed using mean, standard deviation, chi-square and independent student z- test. The results revealed that the quality of a school has a significant impact on the content validity of Geography tests items. Similarly, the content validity of Geography tests items in private secondary schools was higher than that of public secondary schools. Based on these findings, it was recommended that the quality of teaching and learning in public secondary schools should be improved by the provision of teaching materials, supervision of teaching and assessment procedures in schools and moderations of test items by experts in measurement and evaluation.*

Keywords: School quality, Public schools, Private schools, Content validity, Teacher-made-test

1. Introduction

The primary purpose of teaching and learning is to bring about a desirable change in the learner's behavior. Rukundo and Magambo (2010) affirmed that assessing the quality and quantity of learning has been a regular feature of classroom practice in every school. The expected change in learners should be according to the stated behavioral objectives as reflected in the knowledge, skill and attitudinal status of learners which has been predetermined before the instructional process (Anikweze, 2012). For teachers to establish whether their learners have been learning or the extent to which these changes have occurred they have to develop and administer valid and reliable items which will provide information about the students' abilities and performance. Nwagu (2006), affirmed that students' academic performances in schools depend to a great extent on the availability and management of school resource, since the geography curriculum had been arranged in such a way that what students need to learn are arranged from simple to complex depending on their classes. Therefore, teachers cannot be effective in tests construction as expected without the support of the school.

The quality of a school cannot be relegated to the background when looking at the issue of the validity of tests items. The success or failure of any educational system depends on the quality and quantity of resources made available to it. Okon and Achibong (2015), see school quality as the total input that goes into educational system. It determines to a very large extent the smooth functioning of educational system. Oluremi (2013), identifies school quality to include financial resources, physical facilities, material resources and human resources.

2. Literature Survey

The influence of leadership styles of a school principal on school policies is a major factor to also consider. Alimi, Ehinola and Alabi (2012) give empirical support for leadership influence on students' and teachers academic performance. They see school leadership as multi-dimensional constraints which dictate the activities of the students and teachers in the school.

There is a need for teacher professional development and use of data to evaluate student progress through regular feedback mechanism. Suleiman and Mustapha (2016) affirmed that the role of a principal is a critical management skill involving the ability to encourage groups of people including Geography teachers towards common goals. School principals as managers need to exercise transformational administrative styles focusing on the development of value systems, motivational levels and moralities with the development of teacher skills.

Warren (2016) affirms that the leadership gives direction to all activities in the school. The leadership significant contributions to instructional supervision boost students' achievement and teachers' effectiveness in test construction. The performance of students in examinations are attributed to many factors which includes the provision of physical facilities, classroom size, effective school discipline policies, administrative support and effective leadership. It should be part of school policies on the number of question expected from Geography teachers in line with the topics in the curriculum and need for moderating teacher made examinations. This will help in making sure that the items that made up the teacher or classroom test are in line with what is expected in the curriculum and hence the performance of students in external extermination will surely improved.

Volume 8 Issue 8, August 2019

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Awan (2014) affirmed that Schools climate provide a sound foundation for supporting teachers effectiveness. Teachers that work in more conducive environment are likely to performed better in teaching and assessment procedure. The school climate includes the physical environment of the school, the physical setting of the classrooms, and teaching materials. Cebada, Francisco and Daniel (2012) reveal that schools that are poorly equipped, inadequately ventilated are capable of eliciting deviant behavior in learners that can influence teaching and learning thus, influencing the assessment procedure of the students. Class size also affects the quality of test items developed and used by Geography teachers. Teachers will like to developed test items that can be marked easily without considering the content of such test.

Awan (2014) argues that all countries, including Nigeria, have different school systems but when we divide them, we find two major categories of school systems i.e private and public schools. Several characteristics are responsible for making private schooling more attractive compared to government schools .These include better test scores, the use of English as a medium of instruction, better physical infrastructure and lower rate of teacher absenteeism.

Ajayi (2006) found out that school type make a difference on student academic performance. Jonsson and Svingby (2007) affirmed that lower teacher absenteeism and better teacher accountability in private schools compared to public schools.

In the North-Eastern part of Nigeria, especially in Taraba State secondary schools, it has been observed that the instructional environment which includes the classrooms, libraries, workshops and laboratories are inadequate and structurally defectives especially in public secondary schools. The implications of this situation is that it make the achievement of pre-specific objectives of the curriculum unattainable and leads inevitably to failure of Geography students in external examinations as a result of poor instruments used for school assessment.

Table 1: The performance of geography students in Taraba state over a period of seven years (2010-2016) in National Examination Council (NECO) Senior School Certificate Examination

Years	Number registered for Geography.	Number that Passed with credit	Percentage credited
2010	11,504	1,588	13.80%
2011	12,791	1,518	11.87%
2012	10,886	3,597	33.04%
2013	10,190	3,737	36.67%
2014	7920	3624	45.75%
2015	6349	2,820	44.41%
2016	6,242	2,500	40.05%

Source: Taraba state Educational Resources Center (2017)

The achievement of Geography students in National Examination in Taraba State, Nigeria, revealed that the general performance was not impressive. Apart from the decline in the number of students that sat for the examination, the performance was also below fifty percent. It is against the background this study was carried out to

assess the relationship between schools' quality and content validity of Geography test items.

2.1 Purpose of the Study

- 1) To determine the impact of schools' quality on the content validity of Geography test items in senior secondary schools.
- 2) To find the differences in the content validity of Geography test items used in public and private secondary schools

2.2 Research Questions

The following research questions were raised to guide the study:

- 1) What is the impact of schools' quality on the content validity of Geography tests items?
- 2) What is the difference in the content validity of Geography tests items used in public and private secondary schools?

2.3 Hypotheses

These hypotheses were formulated and tested at 0.05 significance level:

- 1) Schools' quality has no significant impact on the content validity of Geography test items
- 2) There is no significant difference in the content validity of Geography tests items used in public and private senior secondary schools.

3. Method/Approach

Research Design

This study employed the use of Causal comparative descriptive research design, due to the fact that the independent variable under investigation already exists.

Participants

The study comprises of all S. S.2 Geography teachers in public and private secondary schools in the Northern Education Zone of Taraba State, Nigeria. A total of 120 Geography teachers were selected for this study. Out of these teachers, eighty are from public secondary schools while forty are from private secondary schools. Purposive sampling procedure was adopted in selecting all the one hundred and twenty S. S.2 Geography teachers. Purposive sampling was adopted because not all the secondary schools in the zone offered Geography as a school subject. S.S.2 Geography curriculum and teachers were also chosen because it is the most stable class in the senior secondary schools.

Data collection and Analysis

Two instruments constructed by the researcher and validated through a pilot study and a panel of three experts tagged 'Content Validity Checklist (CVC) and Content Validity of Geography Tests Questionnaire COVAGTEC' were used for data collection. The content validity checklists consist of 12 topics drawn from S. S. 2 Geography curriculum. These topics were covered in S. S. 2 first and second term scheme of work (2016/2017) academic session in the northern education zone of Taraba state. The items in the question

papers collected from individual teachers were scored on the checklist to ascertain the numbers of topics covered in the curriculum. The total numbers of topics covered by individual teachers from different types of schools were counted to get the content validity. The validity index was obtained by dividing the numbers of topics covered by individual teachers (content validity) by the total numbers of topics in the first and second term S. S.2 Geography curriculum. The questionnaire was used to elicit information on the relationship between schools' quality and the content validity of Geography tests items from the various teachers who took part in the study. In answering the research questions, descriptive statistics of mean and standard deviation were employed while hypothesis were tested using the independent- t- test and chi-square statistics.

4. Results

Table 2: The mean and standard deviation of school quality and content validity of Geography tests items.

	Statement on school quality affecting TMT	\bar{X}	SD	Decision
1	Availability of teaching aids facilitate the development of more valid questions/items	3.68	0.54	Agreed
2	The provision of school library, geographical garden motivate Geography teacher to develop better questions/items	3.84	2.87	Agreed
3	The level of understanding of Geography student enhances valid Geography teacher-made-tests	3.38	0.65	Agreed
4	Geography teachers in conducive schools developed better questions/ items	3.34	0.84	Agreed
5	School leadership style influences the content validity of Geography test	3.19	0.88	Agreed
6	Differences in school policies account for differences in Geography teacher-made-test	3.13	0.88	Agreed
7	Geography teacher in urban school develop better items than those in rural schools	3.06	1.10	Agreed
	Grand mean	3.30	1.10	Agreed

Criterion mean $\bar{X} \geq 2.50 =$ Agreed

$\bar{X} \leq 2.50 =$ Disagreed

Table 4: Independence sample t-test analysis of impact of school type on the content validity of Geography tests items

School type	Levene's test for equality of variance			t-test for equality of means		
	F	Sig	T	Df	Sig (2-tailed)	Mean difference
Equal variance assumed	6.751	0.011	-1.722	118	0.088	-0.513
Equal variance not assumed			-1.485	54.762	0.143	-0.513

In Table 4, the test for equality of variances was used to test whether the variance (variation) of content validity of Geography test items used by Geography teachers in public and private secondary schools is the same. The test shows that the variation is not the same at 0.05 level of significance. ($p < 0.011$). The independent sample t-test conducted to compare the mean content coverage shows that there is significance difference in the content of Geography tests items used in public and private secondary schools. The magnitude of the difference in the mean content coverage was significant.

Results from Table 2 show the mean and standard deviation scores of the rating items on the impact of school quality on the content validity of Geography tests items. All the items have mean rating scale above 2.50 including the grand mean. This shows that the quality of a school to a high degree influence the quality of test made and used by Geography teachers. With grand mean of 3.30 shows that the school plays a major role in determining the content of test developed by Geography teachers in senior secondary school in Northern education zone of Taraba state.

Table 3: Means, standard deviation of content validity of Geography tests items in public and private secondary schools

School type	N	\bar{X}_{CC}	\bar{X}_{VI}	SD
Public	80	3.86	0.32	1.250
Private	40	4.38	0.36	1.996
Mean difference		0.52	0.04	

Key: \bar{X} = Mean scores, SD = Standard Deviation, VI = Validity Index, CC = Content Coverage

Results of Table 3 show that the mean content coverage for public schools is 3.86 with validity index of 0.32 and standard deviation of 1.250 while that of private schools is 4.38 with validity index of 0.36 and standard deviation of 1.996. This results show that the mean content coverage and validity index of teacher-made-tests in private senior secondary schools is higher than that of public senior secondary schools. This suggests that Geography teachers in private schools cover more topics and develop more valid items in their Teacher-made-tests than their public schools counterparts.

Results from Table 3 show the mean and standard deviation scores of the rating items on the influence of school quality on the content validity of Teacher-Made-Tests. All the items have mean rating scale above 2.50 including the grand mean. This shows that the quality of a school to a high degree influence the quality of test made and used by Geography teachers. With grand mean of 3.30 shows that the school plays a major role in determining the content of test developed by Geography teachers in senior secondary school in Northern education zone of Taraba state.

Hypotheses One

Hypotheses Two

Table 5: Chi square test statistics on school quality and content validity of TMT

	Value	Df	Assymp Sig(2-sided)
Pearson chi square	132.738	21	0.000
Likelihood ratio	129.562	21	0.000
Linear by linear association	0.490	1	0.746
N. of valid cases	120		

From Table 5, chi square at 21 degree of freedom ($X^2=132.738$, $p=0.000$) signifies that statistically, school quality affect the content validity of teacher-made-tests used by Geography teachers in senior secondary in Northern education zone of Taraba State.

5. Discussion of Findings

The findings of this study revealed that the quality of a school which includes teaching facilities, school policies, administration style and school location had a significant impact on the content validity of Geography tests items. Results of the differences in the content validity of Geography tests items used in public and private secondary schools revealed that Geography teachers in private schools covered more topics in their tests more than their counterparts in public schools. The findings also revealed that the quality of a school enhances the quality of assessment tools used to elicit information on students academics performance. In line with these findings, Okon and Archibong (2015), affirmed that the high degree of supervision and availability of instructional facilities of private schools over public schools are responsible for the significant differences in the content coverage and validity of teacher-made-tests. The school climate which includes the physical environment of the school, the physical setting of classrooms, instructional materials, social amenities, leadership capacities, availability of fund aids the effectiveness of teachers in developing valid items. Poorly equipped and inadequate ventilated classrooms are capable of eliciting deviant behaviors in learners that can influence teaching and learning, thus influencing the assessment procedure and academic performance of students. Schools that are poorly equipped and staffed may end up producing low achievers. This finding agrees with the finding of Alimi, Ehinola and Alabi (2012), which revealed that the quality of a school influences teacher effectiveness in test construction as a result of differences in facilities available in public and private schools. Awan (2014), in a comparative study of public and private schools revealed that there is no harmony in public school curriculum while in private schools teachers are under pressure to perform and meet certain result oriented outcome. In the public school, there is greater job security, thus the differential incentive package in the private schools relative to the public school may be a factor in explaining why private schools performed better than public schools.

6. Conclusion

Based on the findings in the study, the following conclusions were made:

- 1) There is a significant difference in the content of geography tests items used by Geography teachers in public and private secondary schools in Northern Educational Zone of Taraba State.
- 2) The quality of a school has a significantly impact on the content validity of Geography tests items.

7. Recommendations

Based on the educational implication of the results of this study, the following recommendations were made for Geography teachers, principals and educational authorities. The government should make effort by improving the learning condition in public schools by providing necessary teaching materials that could aid the performance of teachers in the area of test construction. School authorities should make provision for the moderation of items used in assessing Geography students by employing experts in measurement and evaluation as this will go a long way in increasing the content validity of test used by geography teachers in classroom assessment. The school principal should motivate their teachers to developed valid and reliable test that will give dependable estimate of students' performance. The government and educational authorities should improve the incentives and welfare packages given to teachers. As well known, when favorable job conditions are given, teachers can take any pain to sit up and develop valid and comprehensive test items.

8. Future Scope

This research has assessed the impact of school quality on the content validity of Geography test items in senior secondary schools in Taraba State, Nigeria. Additional investigation on demographic differences such as sex, socio-economic status of Geography teachers can be undertaken. Likewise, the population of the study can be increased to give room to validity of the outcome of the study. Correlation study can also be undertaken to look at the relationship between teacher test scores and standardized tests.

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