

Influence of Teachers' Assessment Skills on Geography Performance in KCSE Examinations in Kisii Central Sub County, Kenya

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ABSTRACT

This paper examines the influence of teachers' assessment skills which are *test- planning skill, test-testing skill, test-marking skill and test- reporting skill* on students' performance of Geography subject in secondary schools based in Kisii central Kenya. Geography has been performing poor in Kisii Central Sub County over the years. The dismal performance in the subject may perhaps be due to lack of assessment skills among Geography teachers'. The study adopted Quantitative Correctional research design. A sample of 331 students, 53 teachers and 32 principals were selected using simple random sampling techniques. Data was collected using three questionnaires which were Geography students, Geography teachers and Principals interview schedule. The data was organized into statistical tables and frequency distribution for easy of understanding and creating meaning. The result was described and summarized using frequencies, percentages and means. Statistical Package for Social Scientist (SPSS) was used to analyze data. Hypotheses were used to test the results at 0.05 level of confidence. The study is expected to inform policy makers, Curriculum developers and teacher training collages to integrate assessment skills in their curriculum. It is hoped that if teachers' are capacity build in assessment skills may contribute to better performance of Geography subject at KCSE level.

1. Introduction

Performance of students in Geography subject at KCSE level in Kisii Central Sub County has been dismal over the years. Training teachers in assessment skills has been viewed to influence performance of the subject. Teachers opine that learner's achievement and understanding would better be enhanced if they were augmented in these skills. There is a growing consensus that improving students' performance in Geography depends on a teaching force with appropriate content and assessment skills quite distinct from the usual instructional practice in most classrooms (Evens, 2013). Although initial Geography teacher training nurtures these characteristics, it is insufficient to prepare the teachers for the greater challenges. In order to uphold a dynamic approach to teachers' professional development, there is therefore need for these teachers to be capacity build in assessment skills as a means of improving the subject performance.

Wanyama (2010) observes that Geography teachers are not adequately trained in assessment skills. He maintains that proper assessment skills are lacking due to inadequate resources and material. Whereas in-service of teacher education complements pre- service training, there is lack of adequate and appropriate opportunities for most practicing teachers to enhance their skills in assessment. According to Moore (2009) there is need for teachers to keep up to date in assessment skills as a means of boosting performance in Geography subject. Thyne (2010) indicated the need for teachers

to acquire assessment skills, and noted that a teacher cannot hope to promote his students performance in the subject if he is not sufficient in assessment skill.

Haggar (2012) observed that Geography subject has undergone a period of intensive change. New tools and concepts have led to major shifts in approach to assessing the subject. (Farrant, 2000) agreed that teachers' needed to be augmented in assessment skills and stressed the need for them to respond to the changing circumstances through training. According to Robert (2010), one notable assessment weakness is how teachers assess student work and recommended that teachers to be subjected to training in this area.

Effective utilization of assessment skills is the foundation on which the KNEC system works (Boyle, 2010). The examinations administered by KNEC are a reflection of teachers' work, involving the reconciliation of general knowledge and acquired assessment skills (KNEC, 2013). Test construction and administration has developed into a skillful art, relying not only on the academic training of the teacher and his knowledge of the subject but also training in assessment skills (Aluko, 2007).

According to Ngesa (2012) assessment is a systematic process of obtaining information for the purpose of making decisions about the learners and the curricula. Skills are abilities which trained teachers possess that enable them to develop test tools, prepare marking schemes, mark as well as use assessment results to improve teaching and future tests. Assessment skills are abilities that a teacher use to measure the extent to which instructional objectives and goals are being achieved (KESI, 2014). Results of assessment are used as a feedback both to the teacher and student as well as aimed to improve future performances. Teachers' assessment skills are acquired through training in colleges while they would be sharpened through experience and in servicing probably bone through workshops, seminars and KNEC training. Assessment skill of Geography teachers may not be sufficient to enable them influence student performance (KNEC, 2014).

1.2 Importance of Geography Subject

Geography enables the student to be informed about the physical world and aspects of human relations (KICD, 2012). The real value of Geography lies in the fact that it helps men to live, as well as help man to place himself in the world to learn his true position and what his duties are (KICD, 2012). The subject also helps man to place himself in the world, learn his true position and what his duties are. Nyakundi and Ogonda (2009) observe that the teaching of Geography makes students think and helps them to develop problem solving skills. The subject offers cross-curriculum work between Arts and sciences subjects which expands career choices for students at tertiary levels (Ashley, 2001).

1.3 Performance of the Subject at KCSE Level

Geography is grouped under category four of subjects offered at secondary school curriculum. Students at form three levels are allowed to select subjects in preparation for National examinations and also for their careers. Geography is regarded as one an elective subject where by students are free to choose it. The subject is examinable at form four levels (KNEC, 2011) by the Kenya National Examination Council. It is examined in two papers, which test students on their ability to comprehend and analyze Geographical concepts. Despite this allowance where students are given to take subjects of their interest and ability, the scenario at the end of the four years when they seat for

the Kenya certificate of secondary examinations (KCSE), the results poor. The mean standard score (M.S.S.) for Geography at Kisii Central Sub County level is below average (3.8) whose maximum score on the scale is 12 point (KNEC, 2014). Students' performance in this subject at KCSE levels has been below average in the four years under study in the Sub County. The results may not explain why performance of is poor despite reduced subject content and enough trained teachers in the subject (TSC report, 2015). The reduction in the number of subjects students register for examination at form four was aimed to reduce the students' load, while giving teachers more time to prepare their candidates adequately for national examinations. This move has not reflected meaningful improvement in subject performance for the four years under study.

This study has identified teachers' assessment skills as probably to be a factor that may influence students' performance, although other factors may be at play such as learning resources, environment, teaching methods, motivation, attitudes and school environment but are not studied in this research.

1.4 Statement of the Problem

Geography is one of the elective subjects under group four categories of subjects that are examined at the end of four years cycle in secondary schools in the Kenya. The subject helps candidates to expand their course choices at tertiary and university institutions as it is considered as an art and science subject. Performance of students in the subject in Kisii Central Sub County has been dismal over the years. The results from the KNEC for the subject in 2016 show that it obtained M.S.S of 3.135 at Sub County level while at National it obtained a mean score of 8.57. In 2017 its M.S.S was at 3.048 compared to the National score of 8.34. The trends in performance of the subject show variance in which there is no study which has explained. Students' academic performance depends on many factors however teachers' assessment skills maybe considered as important impetus to good performance. Poor performances in Geography subject in Kisii Central Sub County may be attributed to inadequate training of teachers in assessment skills. These assessment skills range from test-planning, test-testing, test-marking and test-reporting which are considered as important to a teacher's effective groundness for good performance of the subject. This study aimed to determine the influence of Geography teachers' assessment skills on the subject performance at KCSE level. Literature search revealed that there was no any such study that had been conducted in Kisii Central Sub County.

1.5 Purpose of the Study

The purpose of this study was to determine the influence of Geography teachers' assessment skills on students' performance in the subject.

1.6 Objectives of the Study

- i. To establish whether there is a significant relationship between Geography teacher assessment skills and subject performance at KCSE level.

1.7 Research Questions

- i. What is the relationship between assessments skills of Geography teachers and subject performance at KCSE level in public secondary schools in Kisii Central Sub County?

1.8 Research Hypotheses

Ho: There is no significant relationship between teachers' assessment skills Geography performance at KCSE level.

1.9 Significance of the Study

The findings of the study may be used by Teacher training colleges and universities which are involved in preparing teachers in the teaching profession to review their existing curriculum and adopt a course of action geared towards integrating training of assessment skills in Geography. The Ministry of Education and School administrators may use the findings to develop and implement programmes that may enhance in servicing of teachers on assessment skills. This may be done through organizing subject seminars, workshops and clinics. The findings may also assist the Kenya Institute of Curriculum Development (KICD) which is concerned content with development of and the Kenya National Examinations Council (KNEC) which is concerned with development of assessment material to come up with enhanced modules for Geography teachers.

1.10 Limitations of the Study

Three limitations were notable in the study starting with inadequate records in some schools, some records were not well organized and some schools had not digitalized the records which caused the researcher to spend more time to collaborate and analyze. Some essential information was not accurate or missing which was threatening the validity of the study. However in such instances the researcher was forced to expand the sample to enable the data that was collected to be generalized to the population.

Relationship between Teacher Assessment Skills and Geography Performance

It was noted that teachers who were knowledgeable in all the assessment skills contributed significantly towards Geography performance. The respondents were school principals, Geography teachers and Geography students who gave their views on relationship between teachers' assessment skills and subject performance.

Assessment Skills used to Prepare Student

Assessment skills were grouped into four categories which enabled the researcher to make a comparison among the skills and also to determine how they influenced performance of Geography subject at KCSE level as can be shown in Table 1.

Table 1:

Assessment Skills and frequency of use by Geography Teachers

Skills	V.Poor		Poor		Average		Good		v. good	
	F	%	F	%	F	%	F	%	F	%
Test- planning skill (TPS)	0	0	8	15	26	49	6	11	13	25
Test-testing skill (TTS)	0	0	8	15	22	41.5	9	17	14	26
Test-Marking skill (TMS)	0	0	30	57	12	23	6	11	5	10
Test-Reporting skill (TRS)	0	0	16	30	27	51	7	13	3	6

Table 1 compared teachers' assessment skills based on frequencies and percentages of use of the skills. The Table provided a range of responses from very poor to very good in terms of respondent's agreement about the use of the skills among Geography teachers. Test-planning skill (TPS) is an ability which teacher possesses to be able them identify which class and topic would be ready for testing, what amount of time to be allocated per a test or item as well as what the test will be aimed at achieving. Therefore from the data obtained test-planning skill received varied responses with 49% of the respondents agreeing that on average teachers used test-planning skills in preparing their Geography learners. However test-planning skill scored the second highest percentage compared to other skills as frequently used. Test-testing skill (TTS) is an important skill which enables teachers to be able to administer a test satisfactory. Teachers are expected to notify the students when a test will be taken. Also important in this skill is a teachers' ability to be able to provide a good test taking environment where there will be no disturbance, noise or congestion in a room. Teachers will be expected to have good control of time as the students will be taking the test. Under test- testing skill 41.5% of respondents agreed that teachers used averagely this skill in teaching. However this skill was best rated as most frequently used at 26% and even so scored better percentages in all responses compared to other skills.

Test-marking skill (TMS) is one of the skills which bear great bearing on the part of teachers. This skill encases the ability of a teacher to award marks constructively where marks make meaning whenever right or wrong responses are given. The value of a mark is placed correctly without any bias but with a lot of objectivity. A large percentage of respondents at 57% indicated that this skill is poorly used by Geography teachers. It was only 10% of the respondents who agreed that this skill is quite often used by Geography teachers. TMS is the second last skill known and used by Geography teachers.

Test-reporting skill (TRS) is one which is applied at formative and summative period whenever teachers are providing feedback to a class. This skill requires Geography teachers to have knowledge of reporting so that most important and relevant information is communicated at the right time and place. There is a temptation for teachers to feel that reporting is through talking only but more is expected through this skill by marking and discussion. The TRS responses tended to be on the negative scale such that more than a half (51%) of the respondents indicated that the teachers had average knowledge of reporting skill. This skill was least popular among Geography teachers such that the respondents who agreed to the most use of the skill were only 6%. It is important to appreciate that all the four skills are required to be jointly by Geography teachers so that they can effectively be able to influence the subject performance at KCSE level. Some of these skills may not fully be acquired during the pre- service training of teachers but it is hoped that targeted interventions can be put in place to enhance them among Geography teachers.

Figure 1;

Frequency of Use of Assessment Skills among Geography Teachers

Figure 1 shows that test-planning skill (TPS) was the most outstanding in terms of being used by teachers while test-reporting skill (TRS) was least used by teachers in assessing Geography compared to other skills. Teaching-learning is an important skill which carries the rest of other skills however it was noted that the skill was least under the average category. There were notable advantages of having teachers trained in these assessment skills because Geography performance improved as indicated by respondents in figure 3. Being able to possess these assessment skills gave teachers the motivation and professional competency required as agreed by Kibos (2014). Assessment skill among teachers enabled learners to create self-confidence and was particularly visible in schools where Geography subject performed well as given by the students through the questionnaire. Assessment skills training was also noted to have given Geography teachers a strong foundation for better performance in subject as this argument as shared by Wanyama (2010) who noted that teachers develop a strong sense of command when equipped with these assessment skills. Thus teachers saw training in assessment as more motivating in view of its future use and subsequent readiness for competitive job market.

Table 2;

Testing Hypothesis on of use of Assessment Skill in Teaching

Ho: There is no statistically significant relationship between teachers' assessment skills and Geography performance at KCSE level.

$H_0 = 0$

Step ii

Setting $\alpha = 0.05$

Step iii

Test statistics using CHI SQUARE- test of independence (χ^2)

From the data above there are four variables arranged in a contingency table as shown in Table 2 i.e. test-planning skill, test-testing skill, test marking skill and test-reporting skill which were investigated to establish their influence on Geography performance at KCSE level. The hypothesis tested the using chi-square- test of independence approach to determine whether there was any statistical difference between teachers' assessment skills and Geography performance at KCSE level.

Degree of freedom (df) given as: $(r-1)(c-1) = (5-1)(4-1)$. At 12 df and at 0.05 confidence level, reading from (χ^2) distribution table gives us a value of 21.026

Table 2;

Contingency Table Frequency of use Teacher Assessment Skills

	Frequency of use of Assessment skills					Totals
	V. poor	Poor	Average	Good	V. Good	
Test- planning	0 (0)	8 (20.6)	26(29)	6(7.3)	13(11.6)	53
Test-testing	0(0)	8(20.6)	22 (29)	9(7.3)	14(11.6)	53
Test-marking	0(0)	30(20.6)	12(29)	6(7.3)	5(11.6)	53
Test-reporting	0(0)	16(20.6)	27(29)	7(7.3)	3(11.6)	53
Total	0	62	87	22	35	159

Table 3; Chi Square Table Calculations

0	e	0-e	(0-e)²	<u>(0-e)²</u> E
8	20.6	-12.6	158.76	7.7
26	9	-3	9	0.3
6	7.3	-1.3	1.6	0.2
13	11.6	1.4	1.96	0.1
8	20.6	-12.6	158,76	7.7
22	29	-7	49	1.68
9	7.3	-1.3	1.69	0.2
14	11.6	2.4	5.76	0.4
30	20.6	9.4	88.36	4.2
12	29	-1.7	2.89	0.09
6	7.3	-1.3	1.69	0.2
5	11.6	-6.6	43.56	3.75
16	20.6	-4.6	21.16	1.03
27	29	-2	4	0.13
7	7.3	-0.3	0.09	0.01
3	11.6	-8.6	73.96	0.3
Total				∑33.99

$$(\chi^2)_{\text{cal}} = 33.99$$

$$(\chi^2)_{\alpha=0.05} @ 12 \text{ df} = 21.026$$

Step iv decision rule

If $(\chi^2)_{\alpha}$ is < than $(\chi^2)_{\text{cal}}$ then reject the null hypothesis

Therefore our $(\chi^2)_{\alpha}$ is 21.03 and our $(\chi^2)_{\text{cal}}$ is 33.99

Step v conclusion

We there reject the null hypothesis which states that there no any statistical significance between teachers' assessment skills and Geography performance in secondary schools in Kisii Central secondary schools and conclude that there is a statistically significantly influence of teachers' assessment skills on students' performance in Kisii Central Sub County.

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