

Student Attitude towards Learning Physical Geography in Wajir County, Kenya

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Abstract: *This study sought to investigate Challenges in teaching and learning physical geography in selected public secondary schools in Wajir County, Kenya. It has been noted over time that students' performance in Physical Geography has been declining in relation to Human Geography. This, therefore, prompted a study to be carried out so as to establish the major challenges in teaching and learning of physical geography in Wajir County. The research aimed at investigating the student attitude towards learning physical geography in Wajir County, Kenya. The study utilized descriptive survey research design. The quantitative approach used self-administered questionnaires, which were directed to secondary school students taking Geography. Purposive sampling was used to select 21 form three students. The study found out that the students' lack of motivation in physical geography was associated with inadequate number of teachers of geography in schools. Students' attitudes affect performance of physical geography in Wajir County. From the study, it was concluded that students could perform well in physical geography if these variables are addressed. The study recommends that: the number of geography teachers in Wajir County should be increased; Geography teachers to attend in-service training and Students' attitude towards geography should be improved through activities like field trips and use of motivational speakers about the benefits of geography.*

Keywords: Student, attitude, Geography, Environmental Changes, Wajir

1. Introduction

The study of physical geography describes and analyses the location of places on earth and spatial distribution of phenomena in their varied interrelationship as they influence human activities (Berglee, 2012). According to the Kenya institute of Education, physical geography is dynamic as it responds to constant environmental changes. It therefore, transcends boundaries of other subjects and attempt to describe the earth and its diverse elements.

Physical geography borrows a lot from other subjects. Because of its centrality, Mbiti (2002) agrees with Berglee (2012) and adds that like all other science subjects, physical geography should, as far as possible, be taught as a practical discipline. Such class facilities and resources as field trips, maps, geography room, computers, films and models illustrating geographical phenomena will be lively and meaningful to the learner. Hence learning by reality is integral part of physical geography.

According to Cheung, Schlemper & Solem (2008), physical geography contributes greatly to the

acquisition of skills for the study of Environment in which we live. Physical geography equips the students with knowledge and skills to become geographically informed and inquisitive people, who see meaning by the arrangement of things in space; understand the relationship between people, place and environment; ask geographical questions and find answers through enquiry, use of geographic knowledge and skills in solving problem.

Ominde (1971) asserts that the fact of development in Africa requires the role of geography in transformation of natural resources and development of human resources be correctly appreciated. Africa and the world at large are currently facing many problems which are as a result of environmental changes. Among environmental problems facing the world today includes, global warming, desertification, drought among other natural catastrophes. Since physical geography contributes greatly to acquisition of skills for the study of environment, it is only imperative that as many students as possible study it. This also calls for the need to ensure that students perform well in physical geography at secondary school level to become geographers at the university

level, and also qualify for employment in career such as geo-science meteorology, engineering among others. Unfortunately many schools country wide are recording poor performance in physical geography and Wajir County is not exceptional. This caught the attention of the researchers who wanted to find out challenges in teaching and learning physical geography in selected public secondary schools in Wajir County, Kenya.

Table 1 below, shows the general performance in Wajir County geography KCSE result for the year 2012 was 2.68 which translate to a mean grade of D. There was no improvement in the District Mock result analysis, since it scored a mean of 3.05 which is still a mean grade of D. The performance of Geography in Wajir County District Mock exam examined as paper 1 (physical geography) and paper 2 (human geography) shows that there is a significant difference in between students' performance in paper 1 and paper 2. The performance in physical geography is at mean grade of D- while human geography is at mean grade of D+.

This poor performance in physical geography may be brought by non-innovative teachers who might not be using instructional materials in the right way, lack of student exposure to variety of learning resources such as field trips and to some extent the religious belief where geography is perceived by the students as a subject which is contrary to Islamic religious doctrines. Physical geography in secondary school curriculum requires a lot of illustrations during the instructional process hence require more contact hours than what has been slotted in the school time table; this also might be a challenge in covering the syllabus adequately. It was necessary to carry out research so as to find out exactly the challenges in teaching and learning physical geography which has contributed to

this unsatisfactory performance. Gurtis (2019) says that there is a significant relationship between teacher variable and student achievement in physical geography. The variable includes teacher preparation, teachers' psychological knowledge of how children learn teachers' attitudes towards the subject, knowledge of teaching methodology and subject matter.

According to the Kenya National Examination Council (2018), the annual report majority of the candidates display lack of mastery of content especially in physical geography. Physical geography in Secondary School syllabus has been developed to test a range of abilities including comprehension, application, analysis, map interpretation skill, simple calculations and drawing. Its content comprises of internal and external land forming processes, climate, vegetation, Map work among others. A study conducted by Curtis (2019) in Texas reveals that different methodologies was adopted in teaching of physical geography but there were some areas which needed to be improved, such as the integration of physical geography with other subjects in the curriculum and the use of more resources to support the students learning.

In Kenya, the major parameters to measure educational output are performance in examination. These performances are however achieved after various inputs into educational process undergo educational production process. These educational inputs used in the educational process include but not limited to the students, the teacher, teaching and learning resource, school facilities, and the school environment. It is notable that health interaction of the given input results into good performance. This study sought to investigate the student attitude towards teaching and learning physical geography.

Table 1

Performance of geography in Wajir County in KCSE since 2009-2012

KCSE RESULTS	MEAN GRADE	DEVIATION
KCSE 2009	2.445	-0.786
KCSE2010	2.795	+0.350
KCSE2011	2.624	0.171
KCSE2012	2.683	+0.06

Table 2

Wajir County District Mock Results mean for geography paper 1 and 2 since 2009-2012

MOCK RESULTS	PAPER 1(PHYSICAL GEOGRAPHY)	PAPER 2(HUMAN GEOGRAPHY)	DEVIATION IN PP1 AND PP2 SCORES
	MEAN GRADE	MEAN GRADE	
MOCK 2009	2.367	4.255	1.888
MOCK 2010	1.867	3.875	2.008
MOCK 2011	1.603	4.075	2.472
MOCK 2012	1.570	4.500	2.93

2. Literature Review and Studies

Student attitudes towards physical geography

Attitudes held by students about a certain subject play an important role in determining how these subjects are received and taught, positive attitudes towards the subject will favor its success. Ogoma (1987) conducted a study on relationship between achievement and attitudes towards mathematics by girls, affected their performances in the subject where areas' negative attitudes lead to little achievement. This study sought to find out attitudes held by students towards learning physical geography.

The student is one of the components that are vital to instruction. Each student, within the handle of instruction, is a person, so they must be treated as people. The people with diverse natural structures, who come from various situations, actually have distinctive focuses of see around occasions, and they comment on them differently. These contrasts result from different components such as their past encounters, their interface and abilities, and the way they learn, etc. (Tomal, 2010). Students' physical (capacities, etc.) and social traits (expectations from instruction, past encounters, etc.) are features that are quite effective on the kind of attitude that a student

takes to a particular lesson (Indriani, Santoso, & Sarwono, 2019).

Attitude, in a wide sense, implies somebody's propensity to respond to any occasion or protest in his/her environment. In other words, attitude can be characterized as an individual's conceivable behavior in a circumstance, event or towards any marvels (Rukavina, Langdon, Greenleaf & Jenkins, 2019). From this point of view, it is very characteristic that the science of behavior bargains with 'attitude' as one of key concepts. Investigations and request around attitudes are not kept as it were to the science of behavior such as brain research or social brain research. In numerous other areas, inside the outline of social sciences such as legislative issues, economy, history, geography, etc., examination of attitudes is given as a great bargain of significance (Tomal, 2010).

As attitudes have no physical measurement, in other words, as they are unique concepts, it is or maybe difficult to degree them, which suggests it cannot be measured directly. When individuals are inquired almost their supposition of any question or their attitude towards any subject, they usually fail to reply to it precisely and make a few superficial and wrong explanations instep (Ozdemir, 2012).

Attitudes held by students about a certain subject play an important role in deciding how these subjects are gotten and taught, positive attitudes towards the subject will favor its victory. Ogoma (1987) conducted a study on relationship between achievement and attitudes towards mathematics by girls, influenced

their performances within the subject where ranges negative attitudes lead to small achievement.

In a study conducted in Turkey to put forward high school students' attitudes towards geography lessons, Ozdemir (2012) found out that majority of the students cherish geography and their attitudes towards geography courses having no significant correspondence with their "gender" and "class level" variations. Within the work of Jana & Patra (2017) on the attitude of eight grade school students towards the learning of Geography in Purba Medinipur district of West Bengal, the study uncovered that locale of students had significant impact on their attitudes towards geography. Also, gender had no eminent impact on students' attitude towards Geography. The study exposed that, correlation between attitudes and achievements in geography was unequivocally positive. Subsequently, school students of Purba Medinipur appreciate Geography as a school subject and showed a positive relationship between attitude and achievement.

In India, Sarkar, De, & Maiti (2015) found out that students of distinctive environments altogether vary in their mean attitude towards geography and their attitude and achievement in Geography are significantly correlated. In Nigeria, Onuoha & Eze (2014) found out that Geography students in Nsukka senior secondary school appreciate Geology as a school subject and display a positive attitude towards the subject, whereas gender isn't a significant factor impacting attitude towards Geography learning within the study zone.

In Kenya, Kojweke (2013) found that more female instructors to require up a topography instructing combination since this impacts the students' choices particularly the female students who need to require up geology as a subject but they have no motivation from the instructors hence these seem influence students' execution and attitude within the subject. In addition, perusing some time recently course progresses on the students' attitude towards the subject.

Moreover, it is for the most part acknowledged that students are motivated to learn if the instructive substance is firstly curiously; at that point effectively associated with regular exercises by instructors; and demonstrated to be useful for their future improvement. Thus, the suggestion is that understanding students' attitudes and the components may be a key figure in supporting their interests, which would encourage impact their accomplishments and learning results in a Geography as a subject.

3. Methodology

3.1 Research Design

The research study employed descriptive survey design. Descriptive comparative research design was also used to get quantifiable information from the sample. The researchers were able to collect original data from the sample and generalize the opinion obtained from the sample to all schools in Wajir County. The descriptive design was recommended for data collected through questionnaire or observation check list for the purpose of describing certain information about phenomena (Duncan, Comeau, Wang, Vitoroulis, Boyle, & Bennett, 2019).

Research methodology is a systematic way of solving a problem scientifically. The research utilized mixed methods, that is combination of qualitative and quantitative approaches where quantitative examined relationship among the variables. These variables were measured and yielded numeric data that was analyzed statistically. Qualitative approach helped the researchers understand processes by providing detailed information about the context; it provided a depth of understanding concepts.

3.2 Sampling Procedure and Size

A sample is smaller groups obtain from accessible population or carefully selected so as to be representative of a whole with relevant characteristics. In Wajir County there were 24 secondary schools. Simple random sampling was used to select 8 secondary schools, which were presumed to be well above 30% rule. Purposive sampling was employed to select 21 form three students

3.3 Data Collection Procedure

The researchers obtained permission from the University and then got a permit from the National Commission for Science, Technology and Innovation. The permit also was taken to the County Commissioner and County Director of Education to be effected. This enabled the researchers to visit the schools and seek audience with the principals, teachers and students to explain purpose of the research so as to facilitate the administration of the instruments. The instruments were distributed and collected in person from the target population so as to get the higher number of response, questionnaires were the main data collection instrument used because they are cheap, reliable and require minimum management and could be administered speedily.

The student questionnaire comprised of closed-ended questions to enable the researcher to obtain information from respondents' personal opinion and suggestions towards physical geography. The researchers were able to establish the background of the respondents and answer specific questions towards physical geography.

3.4 Validity of research instruments

Validity is the degree to which results obtained from the data actually represent phenomena under study (Clark & Watson, 2019). The questionnaires for the study were designed, developed and subjected to thorough appraisal and discussion with senior researchers. Where necessary, changes were made before questionnaires were administered.

3.5 Reliability of Research Instruments

Reliability is the consistencies that an instrument demonstrates when applied repeatedly under similar conditions (Duncan, Comeau, Wang, Vitoroulis, Boyle, & Bennett, 2019). To establish the reliability of the questionnaires, pre-testing through use of test-retest technique was employed. The researchers administered questionnaires to six students from schools with the same characteristic sampled randomly. The same exercise was repeated after two weeks in that the same respondents would fill the same questionnaires. The raw data from the instruments was subjected to reliability analysis from which cronbach's co-efficient alpha was systematically and consistently computed. The researchers conducted a pilot study in the neighboring Garisa County, which is a neighboring county to Wajir County prior to the administration of research instruments. The computed cronbach's co-efficient alpha $r = 0.78$ was an indication of high correlation. Pilot study enabled the researchers to refine the research instruments by making corrections based on the observation made. The pilot study indicated that the research instrument used was reliable because the minimum reliability index recommended in survey studies is 0.7.

3.6 Data analysis

After the fieldwork, data collected (by use of SAQS) was inspected in order to identify any spelling mistakes and wrongly responded items. The data was cross-examined to ascertain their accuracy, completeness and uniformity. The data was then classified and organized according to the population under study without any mix-ups. The study used both qualitative and quantitative approach where data was

extracted from the questionnaires coded and entered in the computer using the statistical package of social scientists (SPSS)

The findings and the data analysis were made through descriptive statistics. Tables depicting different categories of information of the research were drawn to show different responses from the respondent involved in the study. Frequencies were converted into percentages to make interpretation easier, the researcher intended to analyze the data in chapter four using frequencies, tables, means and percentages on the other hand qualitative data was analyzed qualitatively using content analysis of the meaning and implications emanating from responded information and comparing responses. This helped to rate challenges in teaching and learning physical geography in Wajir County.

3.7 Ethical considerations

Researchers obtains a permit letter from the University after which permission was sought from National Commission of Science Technology and Innovation to carry out a research from Wajir County. Appointment with the head of institutions of the selected schools was sought in order to be allowed to administer the questionnaires to the concerned. The respondents were assured confidentiality of the data obtained. They were advised not to write either the name of their schools or their names in the questionnaire. This enhanced the relationship between the researchers and the respondents during the study.

4. Results and Discussions

Student's Attitude towards Learning Physical Geography

(Follow table 3 next page)

Table 3

Form Three Responses on Students' Attitude towards Learning Physical geography

	N	Mean	Std. Deviation
Physical Geography is hard to understand	21	2.10	.70034
The attitudes of the students towards physical geography is excellent	20	2.20	.69585
All the students have strong foundation in physical geography	21	2.24	.83095
Most students are interested in Physical Geography themes	21	2.33	.91287
Students lack motivation in physical geography	21	2.23	.87014
Students who perform well in geography at class level are rewarded	21	2.52	1.07792
Geography teachers are not enough in the school	21	2.57	.74642
Student get disappointed when he/she misses a Geography lesson	21	2.62	.80475
Valid N (listwise)	20		

From the above table, it can be viewed that students' opinion on whether their attitudes towards physical geography affect the performance of geography subject, results showed that most of them tended to agree with some items that is: Students who perform well in geography at class level are rewarded, Geography teachers are not enough in the school, Student get disappointed when he/she misses a Geography lesson. These analyses produced mean scores of 2.52, 2.57 and 3.62 respectively with high ratings.

Students disagreed with the following items that: Physical Geography is hard to understand, the attitudes of the students towards physical geography is excellent, all the students have strong foundation in physical geography, most students are interested in Physical Geography themes, students lack motivation in physical geography. These analyses produced mean scores of 2.10, 2.20, 2.24, 2.33, and 2.23 respectively with low ratings. On the other hand, students noted their challenges and agreed with the item that: Geography teachers are not enough in the school producing a mean score of 2.57 with high rating.

These findings concur with Langat (2011) who conducted a research in Kiambu County on students' attitudes and their effects on learning and achievement

in mathematics and she reported that most students had a positive attitude towards mathematics and that they perceived mathematics as doable, learnable and important yet this did not translate to good grades. The findings also show that perceptions and beliefs, perceived learning abilities and competencies and previous performances of students in mathematics affected their level of motivation leading to low outcomes. In their study in India, Sarkar, De, & Maiti (2015) found out that students of distinctive environments altogether vary in their mean attitude towards geography and their attitude and achievement in Geography are significantly correlated. In Nigeria, Onuoha & Eze (2014) found out that Geography students in Nsukka senior secondary school appreciate Geology as a school subject and display a positive attitude towards the subject, whereas area and gender aren't significant factors impacting attitude towards Geography learning within the study zone.

From this finding, Geography students appreciate the subject as a school subject and exhibit a positive attitude, suggesting that attitude is a slim factor contributing to poor performance. Other factors like teacher preparation, learning and teaching resources and instructional methods, may have contributed to the poor performance in Wijir County, (Kipchirchir & Kebenei, 2019).

The study found out that the students' lack of motivation in physical geography was associated with inadequate number of teachers of geography in schools. Students' attitudes affect performance of physical geography in Wajir County.

5. Conclusions and Recommendations

This study set out to investigate the student attitude towards learning physical geography in Wajir County, Kenya. The following conclusions were made. First, students' attitudes towards physical geography affect the performance of geography subject, secondly, students do not have strong foundation in physical geography, and thirdly, students need motivation in physical geography, last but not least, Geography teachers are not enough in the schools. With these conclusions, it was worth noting that since schools in Wajir have the stated challenges, the teachers, as well as their schools should put concerted effort in motivating students to develop positive attitude towards the subject. School administration to hire enough geography teachers who should be retrained in new and emerging teaching methods. This retraining could be in different forms for example, workshops, seminars, etc. In order for the teachers to improve on the students' attitude, students and teachers should be motivated and schools should provide opportunities to hire more geography teachers and introduce appraisal mechanisms where the best performing teacher is awarded accordingly.

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