

Instructional Resources, Methodology and Teacher Preparedness in Learning Physical Geography in Wajir County, Kenya

¹Samson Kipchirchir and ²William Kebenei

¹Moi University, Kenya, ² University of Eastern Africa, Baraton, Kenya

Corresponding author: bettsamson2@gmail.com

Received February 20, 2019; Revised March 15, 2019; Accepted March 17, 2019

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 availability and utilization of resources and facilities used in teaching physical geography, teachers' preparedness and effectiveness of instructional methods used to teach physical geography. The study was guided by the Social Cognitive Theory of Albert Bandura, which advocates that students learn through observation. 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 instructional resources and facilities for teaching/learning physical geography are available but underutilized. 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: Physical Geography, Teaching, Learning, Resources, Preparedness, Wajir County

1. Introduction

Physical geography describes and analyses the place of locations on the earth and spatial distribution of phenomena of their numerous interrelationship as they impact human activities (Benjamin & Wakhungu, 2014; Holt-Jensen, 2018) . According to the Kenya Institute of education, Physical geography is dynamic as it responds to consistent environmental adjustments. It, consequently, transcends barriers of other subjects and attempts to explain the earth and its various elements.

Physical geography borrows lots from other subjects. Mbiti (2002), concurs with Holt-Jensen et al. (2018) that like any different science subjects, Physical geography ought to as much as possible, be taught as a sensible area. Such class

facilities and resources as area trips, maps, geography room, computer systems, films and models illustrating geographical phenomena may be lively and significant to the learner. Hence getting to know the truth is an essential a part of physical geography.

(Benjamin & Wakhungu, 2014) emphasized that physical geography contributes significantly to the acquisition of abilities for the look at of surroundings in which we stay. Physical geography equips the students with know-how and abilities to become geographically informed and inquisitive those who see meaning via the arrangement of things in the area; recognize the relationship among people, location, and environment; ask geographical questions and

locate answers via inquiry, use of geographic understanding and abilities in solving the problem.

Ndlovu-Gatsheni (2019) and Ominde (1971) assert that the reality of development in Africa calls for the position of geography within the transformation of natural resources and improvement of human resources. Africa and the world at large are presently dealing with many troubles which might be due to environmental adjustments. Among environmental problems facing the world today include, international warming, desertification, drought, amongst other natural catastrophes. Because physical geography contributes greatly to the purchase of skills in the environment, it is only imperative that as many students as possible look at it. This, additionally, calls for the need to make certain that students perform well in Physical geography at the secondary school level, and emerge as geographers after university degree, and additionally qualify for employment in careers including geoscience, meteorology, and engineering amongst others. Many faculties are recording negative overall performance in physical geography and Wajir County isn't an exemption. This caught the attention of the researchers who set out to locate demanding situations in coaching and mastering physical geography in selected public secondary in Wajir County, Kenya.

1.1 Theoretical Framework

This study was guided by the social cognitive theory by (Bandura, 1991), which from its inception has premised that students learn through observation. This process is described as vicarious learning because learning is a result of watching the behavior and consequences of the environment. According to the social cognitive theory, the observation learning is dependent on four interrelated process involving:

- a) *Attention*: This process is critical because learners must attend a model and the relevant aspects of the behavior in order to learn.
- b) *Retention*: This process is necessary in reducing and transforming what is observed into symbols that can be stored for later use.
- c) *Production*: This process is necessary when learner draws on their stored codes and makes an effort to perform what is observed.
- d) *Motivation*: This process is key for understanding why learners engaged in the prior sub-process including whether they ever attempt to use or create new skill they have observed.

The theory assists the teacher to provide frequent access to models of the knowledge, skill and behaviors that students are expected to learn. Physical geography, according to Mavhura et al., (2018) and Mbiti, (2002), is best learned through observation, where class activities and resources

such as field trips, maps, films and models illustrating geographical phenomena will be lively and meaningful to the learner. This theory is applicable in a classroom situation when a teacher uses visual aids, for example, using a globe to explain the rotation and revolution of the earth. The instructor will present a globe to the learners in the classroom. This will stimulate the learners' interest and their attention is captured, the learner will attend the model as the instructor demonstrates how revolution and rotation of the earth takes place, at this particular stage the learners will be transforming what is observed into cognitive images and symbols that are stored for later use. During the evaluation process, the learner will be able to draw information from the stored codes of cognitive images and be able to perform what was observed. When this process is successfully done, the learner will be motivated to have engaged in the processes as he tries to create new knowledge on what was observed, thus allowing learning to take place. Moreover, this theory was useful in exposing the gap which was filled by this study.

2. Review of Related Literature and Studies

2.1 Instructional methods used in teaching physical geography

Physical geography in secondary school geography syllabus is very special from other parts of geography in that its content material has been designed to tackle a wide arena of competencies together with drawing, calculation, observation, analysis and interpretation. The instructional experiences to be achieved through physical section of geography should be extra sensible than theoretical. The nature of physical geography requires a large set of teaching style, techniques and strategies to facilitate high-quality and mastering process. Teaching techniques suitable for instructing physical geography consist of demonstration, which stimulates college students thinking, team discussions, which gives beginners opportunities to express their opinion, field's study, which enables the newcomers to practice what is discovered in class into an actual existence situation and discovery method, which is recognized to stimulate, resource cognition and decorate the retention. Teachers use a variety of instructional strategies in the teaching/learning process. Alias & Siraj, (2012); Könings, Brand-Gruwel, & van Merriënboer, (2010) state that learning has to do with the individual for whom the instructional activities are designed. According to him, when a teacher goes to the classroom to teach, there are various things that he/she has to bear in mind, among them are the learner age, learner prior knowledge to instruction, aims at accomplishing the relevant stimuli, which exposes the learner in order to achieve his/her goal. In order to attain this, teachers need to employ a variety of student-centered instructional methods in the teaching of physical geography. Physical geography is both

interdisciplinary and practical subject, which can be effectively taught using a large variety of media resources. This implies that it borrows instructional methods and techniques from related subjects.

According to (Demirci, 2009; Edelson et al., 2013; Gersmehl, 2014) teaching technique, there are unique characteristics of teaching Geography. Consequently, when planning to teach Geography the following points must be put into consideration:

- a) Geography is best learned actively, that is, students should be engaged in observation, interpretation, recording and discussion activities.
- b) Geography teachers should use a concentric approach, that is, the teaching is based on the learners' experiences from known to unknown.
- c) There should be an integrative approach to teaching geography that is the physical aspects of geography and other subjects in the secondary curriculum.
- d) The teacher must bear in mind the basic structure of geography as a discipline of its own. That is, Geography is based on the location and distribution of both natural and man-made phenomena.

From the above facts, it is clear that to achieve effectiveness in geography instruction, proper planning is required. In a report from Geographical association in U.K, entitled, "Geography in secondary schools", wrote, "sound Geography teaching requires careful progression which means dealing in the foundation of materials already taught, and using the students' own environment to the full for reference and comprehension," (Lambert & Balderstone, 2012: 51)

Benjamin & Wakhungu (2014) gives a list of suggested learning and teaching experiences as listening to resource persons, making and taking notes, field visits, taking measurements and calculating, sampling and designing questionnaires, taking samples, labeling specimens, carrying out experiments, taking photographs, collecting photographs, interpreting photographs, group discussions, interpreting data, geometrical set, live radio broadcast and cassettes. In United States, (Beatty, 2013) said that computers are required where computer programs in form of tutorials, drill and practice, database, software and simulations are available for teaching physical geography.

Ballantyne & Packer (2009) presents field trip as very effective method of teaching physical geography in secondary schools because it provides learners with sound and concrete basis for conceptualization firsthand information and gives learners long lasting memory. He observes that using field work in teaching physical geography helps in attainment in one of the objectives of teaching geography in secondary school, which states that

"by the end of the course, the learner should be able to apply field work technique in studying geography" (Benjamin & Wakhungu, 2014, P.34).

2.2 Teachers Preparedness

Teachers with a wealth of experience and knowledge are in a greater position to cause great achievement at the set objective in geography instruction. This view is supported by (Bates, 2019) who argue that there is a positive association between teachers' training and student learning. They are convinced that training teachers makes a great improvement in students' achievement. Good results are due to the excellent instructional skills of the teacher and his skills are acquired through training.

(Bates, 2019) posits that the success of a teacher largely depends on his or her personal efforts, context and their general personality. These characteristics can be enhanced if the teacher receives specialized training in methods of teaching physical geography in an integrated approach. (Ballantyne & Packer, 2009) adds that teachers are key factors in contributing towards any enhanced quality of classroom experience. Poorly trained teachers are unable to foster a student centered learning environment. According to Fullan (1982), the quality of education and learning depends heavily on the competence of teachers since these are the most important personnel in the instructional delivery system.

(van Leeuwen, Bos, van Ravenswaaij, & van Oostenrijk, 2019) noted that performance in examination was a function of teachers' qualification among others. The central role of a teacher in the instruction is reflected in the fact, as postulated by Hawes (1979:121), that the teacher in school interprets the objectives and the content in the curriculum plan and manages the learning situation through which intention is transformed into practice. Macharia (1987) says that there is need for systematic short in-service courses, which should be conducted on a continuous basis, more so in a wake of any revision of national development objectives and priorities. This study sought to establish whether teachers of Geography receive in-service training in enhancing their competence in handling of physical geography.

2.3 Instructional resources and facilities

Teaching and learning materials are very essential for effective teaching. The materials help the learners to understand the subject being studied and achieve the specific objectives constructed for the content. (Morrison, Ross, Morrison, & Kalman, 2019) add that instructional materials are critical ingredients in learning.

Instructional materials provide information, organize the scope, sequence the information presented and provide

opportunities for students to use what they have learnt. Grant & Gareis, (2015) show that the availability of text books plays an important role in enhancing student achievement, they further give an example of a study carried out in Nicaragua, which showed that students in classes randomly assigned textbooks score significantly higher by about one third than those in classes without textbooks. Bishop (1985) asserts that teachers may have the competence and positive attitude but if instructional resources are lacking, their effort may be in vain. Similarly Benjamin & Wakhungu (2014) posit that a new programme requires relevant and adequate facilities. Instructional resources and facilities must be prepared and materials purchased to ensure successful activation of the program. Mutema et al. (1992) observe that instructional materials, especially audio -visual and other equipment are useful both for the teacher and the students because they help the teacher clarify certain point in the lesson.

The availability of instructional resources and facilities offers an opportunity for a teacher; lack of them imposes restriction to the teacher. The non- availability of facilities and materials is of major constraints that affect instruction in most schools. According to Ogbu (2015), without instructional resources and facilities, the teacher may not be able to set the objectives that he would like his pupils to attain. It would also mean that students cannot be taught using most suitable methods as these are key instruments necessary to facilitate a successful instructional process.

Misoi (1987) surveyed the availability of instructional materials for teaching geography in secondary schools in Kericho District in Kenya; the findings revealed that instructional materials such as models and specimens were not available in almost all school in the study. According to that study, this could be attributed to the fact that teachers do not see the value of using those materials. It could also be as a result of poor preparation of geography teachers in media practical while in training. This study sought to establish whether the above case is true in Wajir County. Ogechi (1992) conducted a research in Nyamira District on availability, utilization and management of geography teaching and learning resources and he reported that the most available resources for teaching and learning geography in the district are printed media with few audio-visual resources available in some schools, while projected and audio aid are non-existent in the secondary schools in the District.

Kafu (1976) found out that teachers in general, for various unknown reasons did not develop and use instructional facilities, more recent studies in the same field Kirui (1988) Negesa, (1996), and Maiyo, (2002) confirm Kafu's and Misoi's findings by asserting that many instructional materials needed for effective teaching of geography in schools are not only inadequate but also unavailable. Maiyo (2002) puts it; it is no wonder that students performance in geography examination is not impressive at all as observed in various KNEC reports since 1986.

The provision of physical facilities, like geography room, enhances the interest of the teacher in producing, purchasing and using media resources for instruction. These facilities are incentives to the teacher in the development, management and use of media resources because they are avenues in which an instruction is conducted. They also provide security and storage for the selected media resources.

In this connection, it is ideal that Geography should be taught in an exclusive facility like a Geography room. This is the rationale for which Maiyo (2002) called for the need to establish Geography rooms in the Secondary school settings. Reasons given by this scholar on establishing a Geography room as a specific facility for teaching Geography are given as follows:

- a) A real life situation is created when the resources in it are arranged and displayed in a way that is appealing to the learners. This arouses the interest of the students and encourages them to take charge of their learning. When the room is made accessible, the students can use the media resources to expand their knowledge and understanding of geographical issues.
- b) It serves as a storage facility. This has the effect of stimulating the teachers and pupils' interest in producing, collecting or purchasing media resources as a safe storage space is guaranteed.
- c) Specific activities like map work; photographic interpretation and fieldwork require special furniture like long table, screens for showing films or slides and a working space with a sink area for modeling.
- d) Time would be saved and cost reduced as teachers can use the same media resources over and over without the need to produce or purchase new ones.
- e) A geography room acts as a comprehensive laboratory with the correct atmosphere for geography working place. This characteristic would serve to capture the interest of the learners.

In the view of these stated values of a geography room as a facility, the study sought to establish whether geography rooms are available in secondary schools in Wajir County. According to the Kenya Institute of Education (Benjamin & Wakhungu, 2014), Media resources used in teaching and learning physical geography include textbooks, wall maps geographical periodicals, models, photographs, charts, graphs, electronic equipment's like projectors, computers, radios among others.

Anthamatten, Bryant, Ferrucci, Jennings, & Theobald (2018) advocated the need to have a well-equipped geography and observation centers for effective teaching and learning for physical geography. He observed this is an area in geography curriculum which requires practical approach hence a well-equipped laboratory which provides an arena for a geography practical work which can involve learners in basic skills and concepts in physical geography

such as drawing of sketches and diagrams, modeling of geographic features, and the concepts of scale and distance. A study conducted by Yombo (2012) posit that learning physical geography by use of ICT is significant and that every school should endeavor to put them in place for both teacher and students use for better and improved performance. He said an ICT material suitable for physical geography includes digital cameras, internet, video players, overhead projector and scientific calculators. These materials enable the learner and instructor to get access to up to date materials such as Google maps, which are essential in learning physical geography. Roberts (2007:240) suggests that physical geography in secondary school can be effectively taught by use of field teaching and research, which can bring about a range of desirable educational outcomes in that the practical nature of the task such as observation, collecting and recording data helps students to acquire new skills and develop technical competence in physical geography.

3. Research 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 researcher was 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 (Kerlinger 1973)

Research methodology is a systematic way of solving a problem scientifically. The research utilized mixed methods, that is combination of qualitative and quantitative approach 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 a smaller group obtained 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 researcher 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 respondent 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 (Kotharis 1999). 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 (Kerlinger, 1983). To establish the reliability of the questionnaires, pre-testing through use of test re-test 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 researcher 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 obtained 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 concern. The respondents were assured confidentiality of the data obtain. 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 respondent during the study.

4. Results and Discussion

4.1 Instructional Resources and Facilities in Learning Physical Geography

Table 1

Instructional resources and facilities in learning physical geography

	N	Mean	Std. Dev
Do the following items found in your school: Teachers' guide, Geography room, KIE course books, Maps, The globe, Photographs, Atlases, Radio, Computers, Diagrams, and Weather station	21	2.57	.74
Poor preparation of geography teachers in media practical while in training college contribute to poor performance	21	2.66	.016
Availability of instructional resources and facilities offers opportunity for a teacher and lack of them imposes restriction to the teacher	21	2.71	.783
Instructional materials provide information, organizes the scope, sequence the information presented and provide opportunities for student to use what they have learnt	21	2.85	.727
Teachers may have the competence and positive attitude but if there is lack of resources their effort may be in vain	21	3.14	.573
Instructional resources and facilities must be prepared and materials purchased to ensure successful activation of the program.	21	3.33	.730
Instructional materials are useful both for the teacher and the students because they help the teacher clarify certain point in the lesson.	21	3.33	.577
Availability of text books plays an important role in enhancing student achievement	21	3.38	.669
Materials help the learners to understand the subject being studied	21	3.47	.511
Valid N (listwise)	21		

According to table 1 above, it can be viewed that students' opinion on whether instructional resources and facilities for teaching/learning physical geography were available and were properly utilized in their schools, results showed that most of them tended to agree with all items that is: The following items were found in their schools: Teachers' guide, Geography room, KIE course books, Maps, The globe, Photographs, Atlases, Radio, Computers, Diagrams, and Weather station; Poor preparation of geography teachers in media practical while in training college contribute to poor performance; Availability of instructional resources and facilities offers opportunity for a teacher and lack of them imposes restriction to the teacher; Instructional materials provide information, organizes the scope, sequence the information presented and provide opportunities for student to use what they have learnt; Teachers may have the competence and positive attitude but if there is lack of resources their effort may be in vain; Instructional resources and facilities must be prepared and materials purchased to ensure successful activation of the program; Instructional materials are useful both for the teacher and the students because they help the teacher clarify certain point in the lesson; Availability of text books plays an important role in enhancing student

achievement; and materials help the learners to understand the subject being studied. These analyses produced mean scores of 2.57, 2.66, 2.71, 2.85, 3.14, 3.33, 3.38 and 3.47 with an average rating respectively.

The findings are in line with Ogechi (1992) conducted a research in Nyamira District on availability, utilization and management of geography teaching and learning resources and he reported that the most available resources for teaching and learning geography in the district are printed media with few audio-visual resources available in some schools while projected and audio aid are non-existent in the secondary schools in the District.

From this finding, students didn't fully agree that instructional resources and facilities for teaching/learning physical geography are available and properly utilized in Wajir County.

4.2 Instructional Methods used in Teaching and Learning Physical Geography

Table 2

Instructional Methods used in Teaching and Learning Physical Geography

	N	Mean	Std. Dev
Do you use the following instructional methods in class: Lecture, Discussion, Questions and answers, Demonstrations, Project work, Field visit, and Group work	21	2.57	.870
Teacher uses a variety of teaching approaches and techniques in their daily practice	21	2.761	.538
Physical geography both interdisciplinary and practical subject which can be effectively taught using a large variety of media resources.	21	3.00	.836
Sound Geography teaching requires careful progression which means dealing in the foundation of materials already taught, and using the students own environment to the full for reference and comprehension	21	3.00	.894
Teachers need to employ a variety of student- centered instructional methods in the teaching of physical geography	21	3.00	.774
There should be an integrative approach to teaching geography that is physical aspects of geography and other subjects in the secondary curriculum.	21	3.09	.943
The teacher must bear in mind the basic structure of geography as a discipline of its own.	21	3.14	.654
Geography teachers should use concentric approach, that is, the teaching is based on the learners' experiences from known to unknown	21	3.19	.813
Geography is best learnt actively, that is, students should be engaged in observation, interpretation, recording and discussion activities	21	3.23	.436
Valid N (listwise)	21		

As it can be seen in table 2, the researcher established respondents' opinions on whether instructional methods used in teaching/learning of physical geography were appropriately employed in their schools. All the students' respondents tended to agree with all the items (from 1-9) that: they use the following instructional methods in their classes: Lecture, Discussion, Questions and answers, Demonstrations, Project work, Field visit, and Group work; Teacher uses a variety of teaching approaches and techniques in their daily practice; Physical geography both interdisciplinary and practical subject which can be effectively taught using a large variety of media resources; Sound Geography teaching requires careful progression which means dealing in the foundation of materials already taught, and using the students own environment to the full for reference and comprehension; Teachers need to employ a variety of student- centered instructional methods in the teaching of physical geography; There should be an integrative approach to teaching geography that is physical aspects of geography and other subjects in the secondary curriculum; The teacher must bear in mind the basic structure of geography as a discipline of its own; Geography teachers should use concentric approach, that is, the teaching is based on the learners' experiences from known to unknown; and geography is best learnt actively, that is, students should be engaged in observation, interpretation, recording and discussion activities.

This analysis produced the following mean scores: 2.57, 2.76, 3.00, 3.00, 3.09, 3.14, 3.19 and 3.23 with an average rating respectively. This finding therefore is in agreement with (Alias & Siraj, 2012; Könings, Brand-Gruwel & van Merriënboer, 2010) who found out that learning has to do with the individual for whom the instructional activities are designed. According to him, when a teacher goes to the classroom to teach, there are various things that he/she has to bear in mind, among them are the learner age, learner prior knowledge to instruction, aims at accomplishing the relevant stimuli which expose the learner in order to achieve his/her goal. In order to attain this, teachers need to employ a variety of student- centered instructional methods in the teaching of physical geography. Physical geography both interdisciplinary and practical subject which can be effectively taught using a large variety of media resources. This implies that it borrows instructional methods and techniques from related subjects.

It can be concluded that since physical geography is a practical subject, appropriate instructional methods in teaching/learning of the subject is to some extent employed in public secondary schools in Wajir County.

Teachers Preparedness used in Teaching and Learning Physical Geography

Table 3
Teachers' preparedness in teaching and learning Physical Geography

	N	Mean	Std. Dev
There is need for systematic short in-service courses, which should be conducted on a continuous basis for Geography teachers	21	2.85	.853
Poorly trained teachers are unable to foster a student centered learning environment	21	3.00	.948
Teachers are key factors in contributing towards any enhanced quality of classroom experience	21	3.14	.727
Quality of education and learning depends heavily on the competence of teachers	21	3.23	.624
Teachers with a wealth of experience and knowledge are in a greater position to cause great achievement in Physical Geography performance	21	3.28	.845
Teacher in school interprets the objectives and the content in the curriculum plan and manages the learning situation through which intention is transformed into practice	21	3.28	.717
The success of a teacher largely depend on his or her personal efforts and specialized training in methods of teaching physical geography in an integrated approach	21	3.33	.658
Valid N (listwise)	21		

In examining Table 3, the students' respondents on whether the teacher's excellent instructional skills/preparedness could cause great achievement of physical geography in public secondary schools in Wajir County. The results indicated that the respondents tended to agree with all the items (from 1-7) that: There is need for systematic short in-service courses, which should be conducted on a continuous basis for Geography teachers; Poorly trained teachers are unable to foster a student centered learning environment; Teachers are key factors in contributing towards any enhanced quality of classroom experience; Quality of education and learning depends heavily on the competence of teachers; Teachers with a wealth of experience and knowledge are in a greater position to cause great achievement in Physical Geography performance; Teacher in school interprets the objectives and the content in the curriculum plan and manages the learning situation through which intention is transformed into practice; and the success of a teacher largely depend on his or her personal efforts and specialized training in methods of teaching physical geography in an integrated approach.

This analysis produced the following mean scores: 2.85, 3.00, 3.14, 3.23, 3.28, 3.28 and 3.33 with an average rating respectively.

The findings in this study are in agreement with that of Garret (1999) and Bates (2019), who posits that the success of a teacher largely depend on his or her personal efforts, context and their general personality. These characteristics can be generally enhanced if a teacher receives specialized training in methods of teaching physical geography in an integrated approach. Garret (1999) adds that teachers are key factors in contributing towards any enhanced quality of classroom experience. Poorly trained teachers are unable to foster a student centered learning environment.

Form three students in Wajir County who are the respondents in this case, tended to agree that the teacher's excellent instructional skills/preparedness caused great achievement of physical geography.

5. Conclusions and Recommendations

This study set out to investigate challenges facing teaching and learning of physical geography in Wajir County. The following conclusions were made. First, schools have very limited resources to facility teaching and learning. Secondly, teachers were not innovative enough to use different types of teaching methods. They relied majorly on lecture method, which is teacher centered. Finally the study also found that there was limited preparedness by teachers. Training teachers on how to deliver instructional materials to the students were necessary. 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 providing teaching and learning resources for both the teacher and the learner. Teachers 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 preparedness, schools should provide opportunities to introduce appraisal mechanisms where the best prepared teacher is awarded accordingly.

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