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Role of Geography and Pedagogical Approaches used in the Training of Pre-service Teachers in Kenyan Universities: A Case of Kenyatta University, Kenya

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Abstract

In which countries are elephants found! The discipline of Geography is as big as an elephant and as thick as the equatorial forest. The question of how Geography should be taught has been an agonizing pedagogical issue among educators of the discipline. Geography is an important discipline in the school curriculum and its connectedness with other disciplines taught in schools outweighs its role in educating the young in schools today. If taught to meet the said objectives of teaching Geography, then the discipline enables learners to meet the national goals of education, equips the learners with useful life skills and professional attitude that meets the global labor market demands. This paper seeks to establish the role of Geography, the existing pedagogical strategies and methods of training that teacher training institutions in Kenya use to prepare novice teachers who teach in secondary schools. It further examines the framework of conceptualizing school Geography within the school curriculum in order to prepare learners for challenges that befall them long after schooling. School Geography therefore as it applies in a learning context means: learnt concepts, knowledge and skills within the national goals of educational and levels of assignment designed to prepare the learner for the future world of work as well as the learner having knowledge to relate with the environment. The study used an exploratory survey approach to collect data from 435 pre-service teacher trainees at Kenyatta University. The current pedagogical strategies used have not achieved the high global levels of training that adequately equip the teachers for their professional works that is meant to equip the learners with content and high level skills that meet the global labor market demands and the expected threshold in society. It is important to note that this paper further establishes numerous challenges experienced in the course of training and acquisition of knowledge and skills. The study has proposed the use of American Humane Association model for adaption in the training of pre-service teachers in the Kenyan Universities. In essence, Geography plays an important role in education for sustainable socio-economic, cultural and political development of societies in the world. Therefore, Geography is like an elephant that is extremely big and intelligent and so never gets lost. The discipline should be given the approach it deserves in order for it to

make its contributions in the creation of knowledge and skills in the field of education and beyond.

Keywords: Geography, Goals of Education, Pedagogical Strategies, Classroom Practices, Pre-Service Teacher Trainees, The Teacher and Student/Teacher Practices and Society.

Background to the Study

Knowledge is the chief currency for transacting the future and the essence of modern age that propels socio-economic, political, and cultural development of society. An effective system of education is normally tasked to provide knowledge and skills to the learner that which can be used as a key to advance, reproduce and enhance a suitable economy. In essence, knowledge provided through an education system ought to adequately and efficiently equip the learner and prepare one to realize and effectively utilize the eight goals of education as stipulated in the education policy of a given nation (KIE Syllabus, 2002).

The aim of education is for learners to invest in acquiring knowledge and skills that will assist them in improving their life prospects, as well as equip them to be able to institute expected reforms in society for support of humanity by contributing towards national growth and development for the good of society. Therefore, the pursuit of knowledge and skills must better serve individual growth and sustainable development not only of an individual but also the community one belongs to and society at large. Apparently, stakeholders involved in knowledge delivery and acquisition have a responsibility to ensure situations that keep abreast of knowledge development, research and training that guarantee modern skills in the labor market for purposive growth and development of individuals and society. Institutions of higher learning and training have a task of preparing teacher trainees with meaningful knowledge and skills, which they can use when imparting information to the learners for sustainable growth and development.

Geography is essential to our education for it is not all about locating places in the map, naming capital cities of famous countries or giving direction of places but the study of our world has many other implications as well such as:

a] It is multidisciplinary, that is, understanding the environment for man's ecological, social and economic purposes as Geography extends to every discipline. Ondigi (2002) argues that any body of knowledge that tells us anything about the earth hinges on or diverges out of Geography as a specialized field or branch of the whole. In this case therefore, Geography could be regarded as "a Mother" of all subjects taught in schools for as a discipline, it relates and is related other disciplines taught in schools by using the tools of natural science to create knowledge in the discipline.

b] It has played a big role in the development of our civilization, that is:

i] It informs our perceptions both true and false, that is, Geography brings to our knowledge the world as we understand it and the true images of the world through pictures and photography.

ii] Geography is one of the few parts of social studies that are hands-on. Knowledge in Geography helps students make a positive mark about the world and seek to offer solutions to existing problems in the environment.

iii] Geography provokes and answers questions about the natural and human world, using different scales of enquiry to understand various perspectives of life as man relates with his environment.

iv] It prepares the learners for future life and employment long after schooling.

v] Geography is a focus within the curriculum for understanding and resolving issues about the environment and sustainable development.

vi] It is also an important link between the natural and social sciences, that is, learners encounter different societies and cultures that are best understood through the discipline of Geography. For this, geographical knowledge helps the learners realize how different nations rely on each other for their existence.

vii] Geography inspires the learners to think about their own place in the world, their values and their rights and responsibilities to other people and the environment (Ondigi, 2002; KIE Syllabus 2002; www.Geography.org.uk/download/ga-nks. Downloaded July 14th 2012

In examining the philosophy of teaching and learning, Geography education is aimed at understanding the dimensions of man and his environmental relationships. These relationships can best be understood through experience and observations, which enhance practical understanding and permanent learning processes of geographical changes. For example, the use of fieldwork enhances the learning outcomes through experimental learning (Foskett, 1999; Lidstone and Stoltman, 2007; Atherton, 2005). In the profession of teaching and learning, real geographical knowledge takes place in the field as a result of an interaction of physical, mental and emotional experiences. Thus, experimental learning according to Burn (1995) causes relatively permanent change in the behavior and internal processes such as critical thinking and reasoning, attitudes and emotions of the learner.

Geography as a more practical subject requires the use of strategies that give the learner hands-on experiences to be able to relate better with the environment. Kolb and Kolb (2001) attribute experimental learning to being in possession of four different abilities: concrete experience abilities, reflective observation abilities, abstract conceptualization abilities and active experimentation abilities. These abilities are necessary for the learner to use long after schooling and therefore any teaching processes must enhance a more practical approach based on their training at universities. Sharlanova (2004) supports Kolb and Kolb's experimental learning for the author argues that it means "learning by reflection on the experience" for without reflection on experience students are in danger of rote memorization and will continue to make the same mistakes over and over again in their lives long after schooling. Further, Morgan and Lambert (2006) argue that School Geography curriculum should be considered within a broader observation about nature and contemporary society. It is the researcher's view that by nature, Geography is unique for it relates well with all disciplines taught in schools and conforms to the scientific norms of natural science. Apparently, the nature of training of the teachers and the manner in which they carry out their professional careers is important in shaping the learners' future contributions to the society and career growth.

Objectives of Study

The General Objectives of The Study

Geography is a discipline that deals with how man relates with his environment and therefore, it is a subject that is alive. It deals with issues that affect the environment as was created by God (Genesis 1:1-31). What is of great importance is that man has interacted with the environment over time and coupled with nature all that was in creation has been transformed. The essence of this paper is to examine what Geography as a discipline is and how the content of Geography taught in schools explains the socio-economic, cultural and political transformation of the environment. The emphasis will be on the best training strategies used in universities to prepare teacher trainees on how to teach content in Geography in order to meet the goals of education and to give sanity to the discipline that is the heart of man's survival on earth, hence emphasizing the significance of Geography in the school curriculum.

The Specific Objectives

Therefore, the specific objectives of this study were to:

i) Identify critical issues and constraints for the discipline.
ii) Clarify priorities for teaching and research in the discipline geared towards meeting the national goals of education.
iii) Link developments in the discipline as a science with national needs for Geographical education.
iv) Increase the appreciation of Geography within the scientific community and suggest the way forward on the future directions of the discipline, and
v) Make recommendations on the best practices that will ensure the positivity of the discipline.

Justification of the Study

The study was important for research shows that knowledge and skills imparted by forcing on the appropriate strategies tend to bold or stain the minds of the learners and as such there is no meaningful learning. Similarly, rote-memorization of knowledge also gives results that produce learners who are slow in thinking, handling situations, and also poor in innovative and critical thinking. Thus, a sound education system should be one producing critical thinkers and graduates who reason apprehensively to mythologically achieve their self-propelled career ambitions and articulated goals of education of a given society.

Recognizing the flaws of an education system requires high powered review of the said goals and objectives of the curriculum, but research shows that the challenges facing teachers, students, and leadership in schools and the learning environments in the Kenyan situation marginalize the government's concerted efforts to provide the best in training and learning (ComTech, 2011). The educational training in the Kenyan institutions of learning is greatly seasoned by high enrollment of students, lack of teachers' preparedness to handle large classes, limited resources, which include: teaching and learning resources, adequate human capital and to some extent limited knowledge in handling technology in teaching and learning in the classroom.

As a discipline it seeks to offer geographic knowledge and perspectives that engage valuable research and teaching on matters of training and learning that range from environmental

challenges to social conflict in the society that form the focus of the goals of education in Kenya. Thus, the manner of training at universities and learning processes in schools form the yeast of this research meant to unearthen the practices in the Kenyan system of education

Methodology

This exploratory survey study sought to establish the pedagogical strategies, that is, the modes of delivery and knowledge acquisition processes envisaged in the Kenyan University training institutions that prepare teachers for schools. The study used 435 pre-service teachers undergoing training in Bachelor of education to teach Geography in schools. The researcher used questionnaires and interviews to collect data. The study addressed the styles adapted for training, learning and the challenges experienced by both the lecturers and the students in their quest for knowledge and skills to meet the expected career goals.

Discussion of the Findings

Data was collected from 435 respondents and analyzed according to the set objectives for purposes of understanding how best pre-service teachers are prepared for their careers in teaching. The findings indicated that while there is some useful training of pre-service teachers going on in the Kenyan Universities, there is need for revisiting the university curriculum because emerging issues and changes in time have compounded the strategies, approaches, techniques and methods used in the preparation of learners for today's global job market.

Certainly, there is need for new thinking on how to handle trainees/learners in the classroom, train them in conformity with the prevailing technological changes and at the same time make them aware of integrating technology in their teaching. The baseline findings of a study done at Kenyatta University showed that there was deficiency in the use and integration of technology in teaching, training and learning among the lecturers and the pre-service teachers in today's classroom practices (ComTech, 2011). Consequently, the current practices have greatly impacted on the on-going teacher preparation practices in the form of training at the university levels and by extension the classroom practices in schools.

Current Practices Used in The Training of Pre-Service Teachers at Kenyan Universities

The study was set to investigate the current teacher training practices in Geography *at* Kenyatta University. The responses were looked at in three categories namely: Learner centered, Teacher centered and Teacher-Student centered practices of which the findings are discussed as follows:

Learner Centered Approaches

A] Individualized Practices

The pre-service teachers were asked to indicate the learner centered practices used in the teaching of Geography in the classroom and their responses are as indicated in figure 5.1:

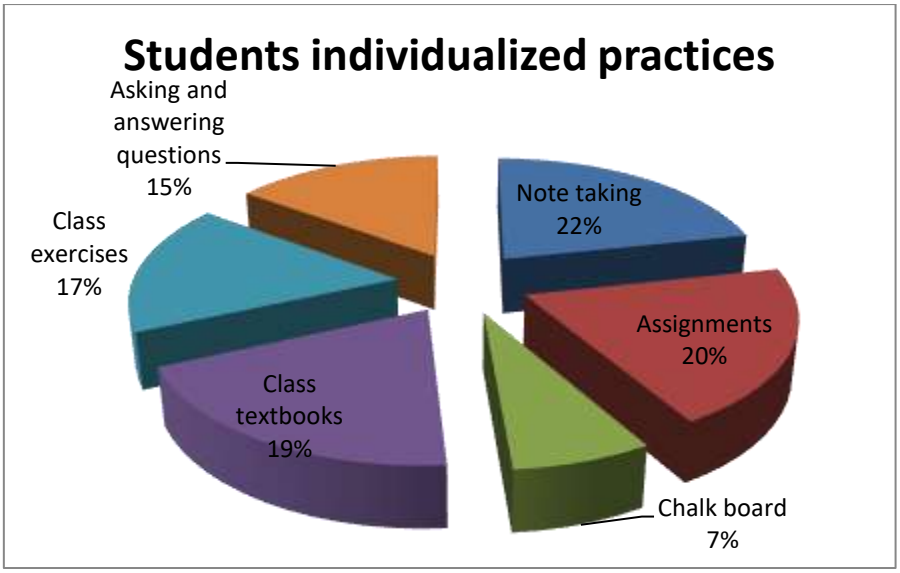

Figure 5.1 Students individualized practices, [Data 2012]

Majority of the pre-service teachers 22% (94) indicated that students took notes in class during the lesson, while 20% (87) gave assignments. Students 19% (85) read the class textbooks, 17% (73) were involved in doing exercises in class and 15% (65) preferred asking and answering questions. The study realized that only 7% (31) of the learners were involved in solving problems on the chalkboard.

Given these responses, the researcher argues that a lot of time is spent in taking notes either from the teachers or from the class textbooks for as they read the textbooks; the students are expected to take notes, which makes this process to be student centered. Although learners were also more involved in asking and answering questions than in solving problems on the chalkboard, most of the questions are directed by the teacher thus making students to rely on the teacher. This reflects the process of training the pre-service teachers go through at university for it is what they practice.

B] Group Based Practices

As for the group-based activities, the responses are as shown in figure 5.2.

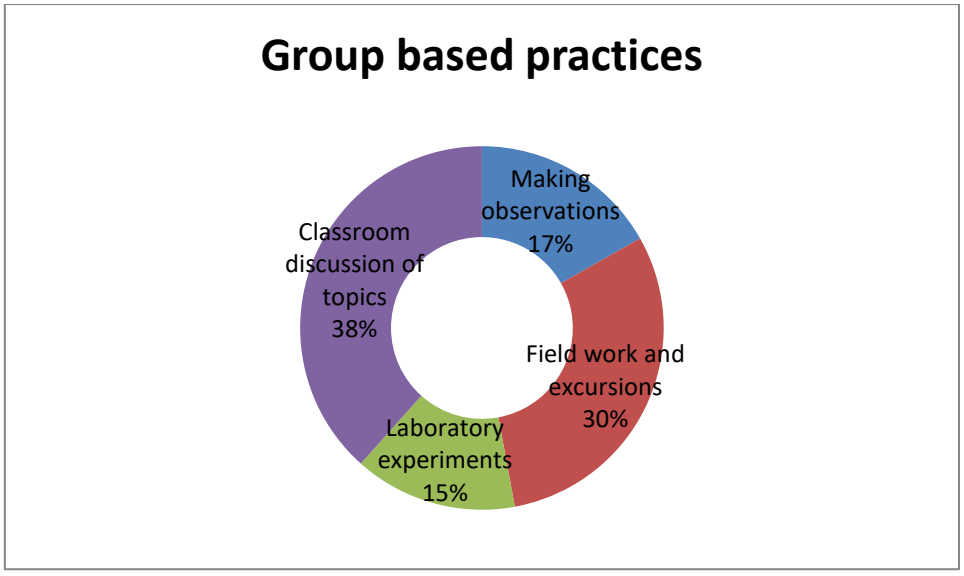

Figure 5.2: Group based practices, [Data, 2012].

The researcher wishes to note that with classroom discussion of topics 38% (167) it posed a challenge to the students, as learners were eager to learn as addressed at the time by their teachers. In this case, the teacher posed questions to the class or gave assignment to the learners who then responded to the teacher or the students talked to each other as individuals or groups. Through the discussions, the teacher got feedback if the learners had understood the concept or not, thus providing immediate feedback. With group-based practices the learners developed communication skills and saw to it that there was active participation. Fieldwork and excursions 30% (132) should be enhanced bearing in mind that Geography is a practical subject. This should be the more commonly used strategy and where appropriately used, there is meaningful experiential learning that takes place. Making observations 17% (73) was also used and both learners and lecturers were comfortable with the strategy. It is worth noting that Geography room laboratory experiments 15% (63) have been left out; which is as a result of inadequacy or lack of facilities for the practical. This approach learners a more practical opportunity in learning and perfecting personal skills for practical use in the future long after schooling.

Studies have showed that experimental learning according to Burns (1995) causes relatively permanent change in the behavior of a learner and internal processes such as thinking and emotions. Kolb and Kolb (2001) attributed experiential learning to the possession of four different abilities: concrete experience abilities, reflective observation abilities, abstract conceptualization abilities and active experimentation abilities. Therefore, both fieldwork and excursions and laboratory experiments should be complemented to give the learners a chance to have hands-on experiences. Hence, the training of pre-service teachers should embrace the practical nature of training and delivery practices, which forms the core part of their career training and professional work.

Teacher Centered Approaches

The researcher wanted to establish the commonly used practices in training pre-service teachers at the university that reflects what the teachers practically did in their teaching careers. Results in figure 5.3 show the key lecturer centered approaches as indicated by the respondents.

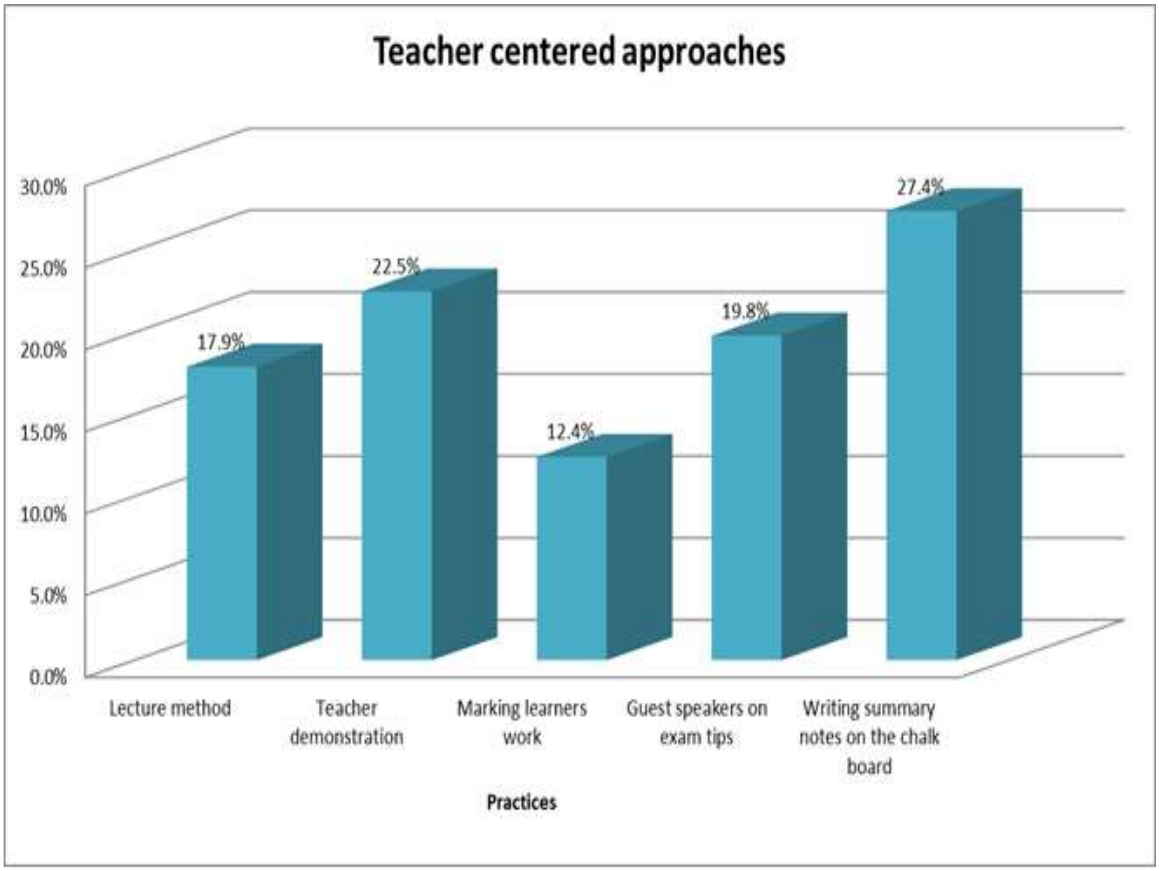

Figure 5.3 Teacher centered approaches, [Data, 2012].

The study shows that an overwhelming 27% (119) of the teachers wrote summary notes on the chalkboard for the students and the least 12% (54) indicated marking learners' work-approach was used. Teachers lectured 17.9% (78), while 19.8% (86) invited KNEC examiners as Guest speakers in their school to give examination tips to the students more so to the candidates, teacher demonstrations 22.5% (98) and lecture method 17.9% (78) were still being used as appropriate strategies of teaching and learning. These findings indicated that the more traditional expository approaches were used as opposed to heuristic approaches that give learners an opportunity to study on their own.

Apparently, the more modern modes of teaching such as: problem-solving, small group discussions, fieldwork, projects participations and co-operate learning are not greatly embraced in the teaching and learning processes in the classrooms (Ondigi, 2011). As for the training of Geography, lecturers and pre-service teacher trainees should embrace the more modern forms of teaching and learning for Geography' should handle critical issues and perspectives of science and society to engender its value in the school curriculum. The current school curriculum in Kenya requires that the teachers be more practical in their teaching so as to build in the learners the life skills which are basically hands on experiences necessary in one's life long after schooling (GoK-commonly referred to as MacKay report, 1981; KIE Syllabus, 2002; Atherton, 2005).

Students -Teachers' Practices

The researcher wanted to establish the most preferred practices in teaching between the teacher and the students. Results in figure 5.4 below indicates that the teacher and the

learners are highly involved in asking and answering of question in class as well as drawing diagrams and maps.

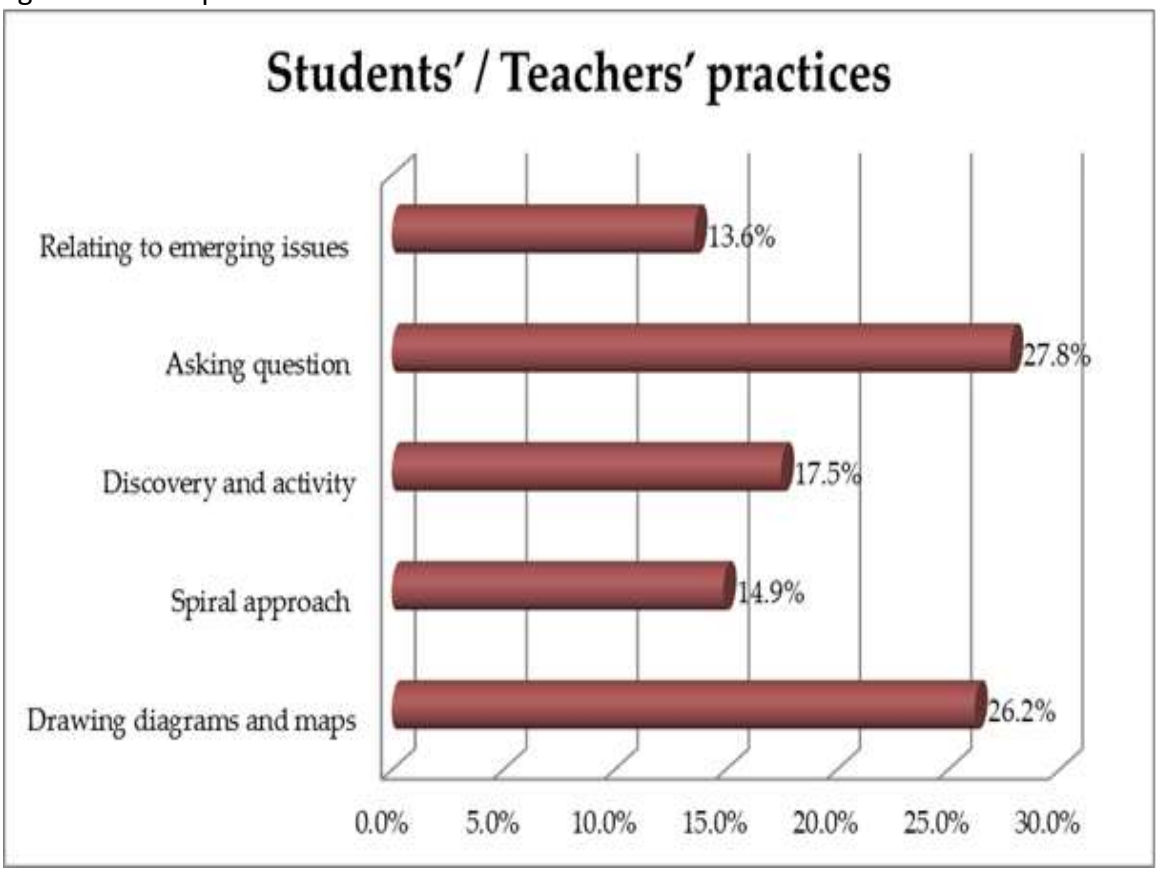

Figure 5.4: Students' and Teachers' practices, [Data, 2012].

Apparently, this study reveals that asking of questions 27.8% (121) was the preferred mode of classroom practices in a teaching and learning environment. Whereas, drawing diagrams and maps, discovery and activity, spiral approaches and relating to emerging issues took 26.2% (114), 17.5% (76), 14.9% (65) and 13.6% (59) were also respectively used. Nevertheless, when both the teacher and the learner are engaged in the classroom, teaching and learning of Geography becomes easier and interesting. Both the teacher and the students should be involved in utilizing the available physical recourses geared towards a better understanding on the concepts of man and the environment while in the classroom. Discovery and activity method creates a sense of confidence in the learners hence creating higher chances of exploring further and being in a position to relate the content to emerging issues and the national goals of education. It is worth observing that spiral approaches see to it that the geographical concepts covered earlier are important and continuously applied in school and much later after schooling.

Learners' Accomplishment in The Society Long After Schooling

Education is for purposes of enlightening and equipping the learners for the future world of work. The researcher wanted to establish the learners' accomplishment long after schooling given the nature of teaching and learning that take place in schools (see figure 5.5).

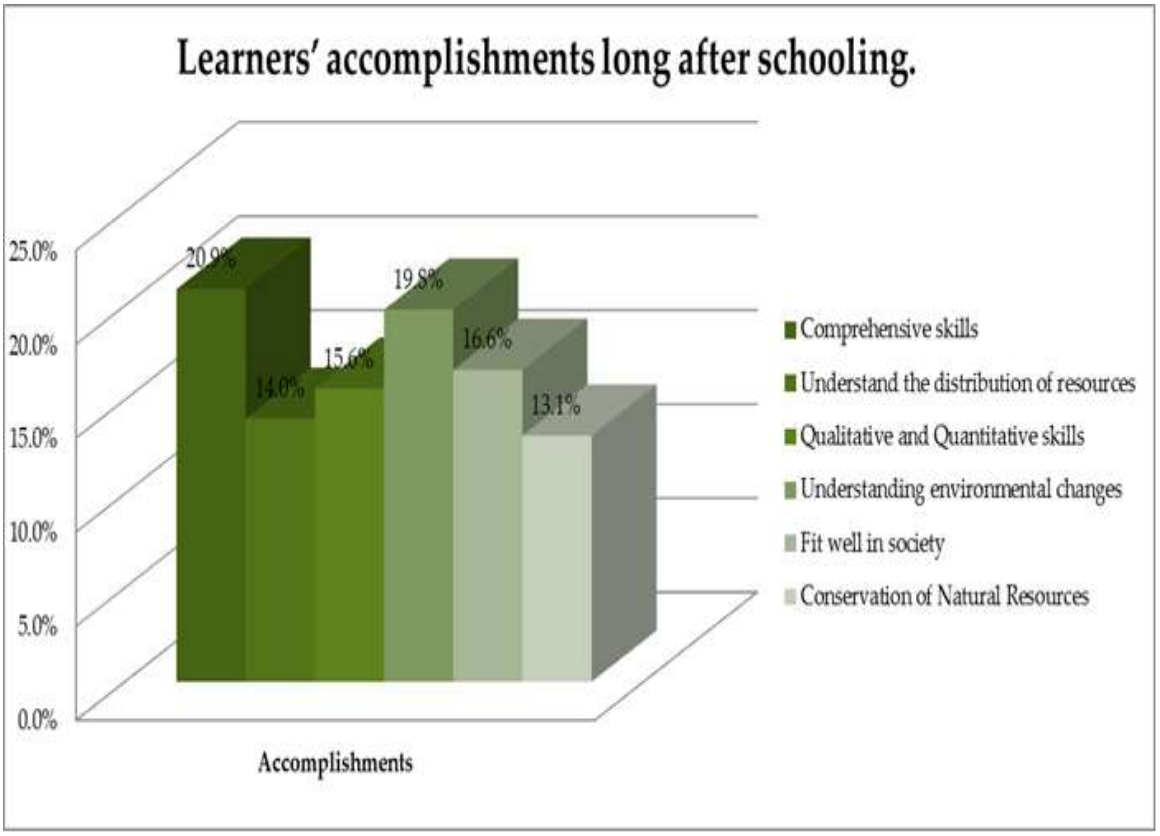

Figure: 5.5: Learners' accomplishments long after schooling, [Data, 2012].

The findings indicated that 20.9% (91) develop comprehensive skills when rightful approaches are used in the classroom; while 19.8% (86) of the respondents felt that the learners understand the environmental changes better. Only 16.6% (72) develop qualitative and quantitative skills 15.6% (68) have an understanding of environmental changes, 14% (61) of the learners fit well in the society 13.1% (57) developed good skills in the conservation of national recourses.

Geography inspires the learners to think about their own place in the world, their values, rights and responsibilities to other people in the environment around them (Ondigi, 2002; KIE Syllabus, 2002). The study positively indicated that geography is not only taught for its own sake, but it helps a citizen to understand civic issues and environmental concerns necessary for one to comprehend and apply in life long after schooling. In addition, comprehension, literacy as well as quantitative skills assist one to live a meaningful life and to practice sound financial management necessary in developing strategic plans in life (Ondigi, 2002).

Thus, learners invest in education massively to improve their life prospects and to be empowered to institute prospective reforms in society for support of humanity. Hence, pursuit of knowledge must better serve individual growth and sustainable development of society at large. A good understanding of geography's long standing concern with the evolving spatial organization and material character of the Earth surface is of great relevance to decision makers in society. Geography is therefore, obligated to prepare teachers and learners adequately for the challenges of the discipline. Kenyan Universities have to take charge and lead in the crusade towards achieving a balanced environmental growth and

development of all aspects in society through effective and efficient training that guarantee the learner's practical skills.

Studies have revealed that the use of fieldwork enhances the learner's learning outcomes through experiential learning (Foskett, 1999; Lidstone and Stoltman 1998; Atherton, 2005). Real geographical knowledge takes place in the field as a result of interaction of physical, mental and emotional experiences, thus the use of romantic naturalism approaches best fit our training in institutions of higher learning. This study is different from the said assertion for it indicates that the teacher-trainees were more exposed to the use of assignments and reading textbooks in the classroom. Group work as well as taking notes was consistent with what the teachers practices in class as indicated earlier in this study. Experimental approach to teaching, which leads to experiential learning for the teacher trainee as well as the more practical learning in the teaching of geography in schools in Kenya is wanting.

Approaches Used in Training at University

The expository approaches commonly used in the training of teachers at the Kenyan Universities and thereafter the practices in schools exhibit the nature and practice that is dominantly theoretical. Figure 5.6 shows that 44% (191) of the lecturers preferred lecture method, 25.1% (109) spiral approach while demonstration and teaching aids display took 17% (73) and 14% (62) respectively.

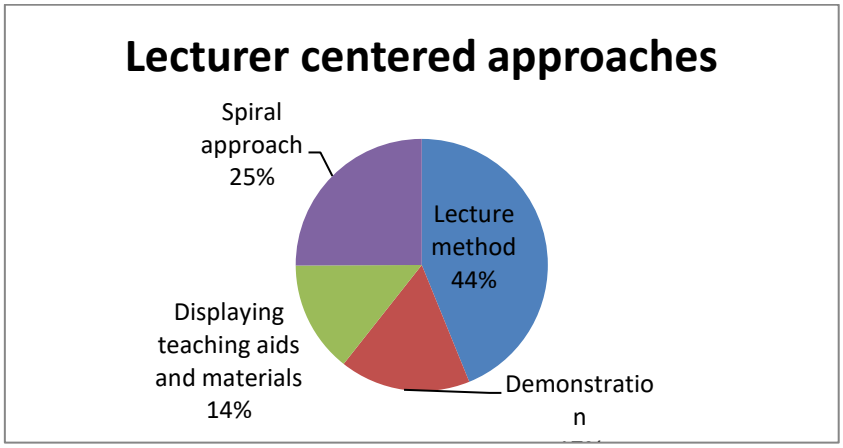

Figure 5.6: Lecturer centered approaches, [Data, 2012]

The study realized that there was more of lecturing than use of demonstrations during the lectures. This use of lecturer method is as a result of lack of adequate teaching and learning resources and large classes. Consequently, there is no effective use of the more practical strategy training (ComTech, 2011). The pre-service teachers are not adequately trained in the use of practical approaches in order for them to see the need for using these approaches when teaching geography since it is not in the teacher's interest to struggle where there are no adequate resources. This in the long run spells a negative impact in the performance or attitude both for the teacher and the students. This deviates from the fact that the lecturer should impart knowledge, skills and the right attitude in the pre-service teacher trainees geared towards making geography a practical and a lifelong subject and that the skills should prepare the pre-service teacher trainees to fit well in the teaching profession.

How Are Pre-Service Trainees Prepared at Kenyatta University for A Lifelong Education?

The researcher wanted to know the geography teachers' opinion on their satisfaction with the training at Kenyatta University as they were being prepared for the teaching of geography in schools across the country. Majority of the teachers strongly disagreed that it was satisfactory 43.8% and 22.7% disagreed. On the other hand, 15.6% agreed, 10.9% were neutral and 7.0% strongly agreed. The findings of the study indicated that there is need to redesign the training of geography teachers for schools. This can be enhanced through the use of approaches, techniques, strategies and methods of teaching and learning that embrace heuristic outlook in the training and thereafter practiced in the teaching profession.

It is apparent that with the introduction of integration of ICT in teaching, more time and resources should be invested in preparing the teacher-trainees for the tasks ahead of them on using the more modern approaches. Emphasis in training should focus on the integration of ICT and use of more practical approaches in the teaching and learning of geography, that is, practiced during the professional career for the benefit of learners.

Nevertheless, geography as a discipline must seek to offer geographical knowledge and perspectives that encourage valuable research and teaching on matters of training from environmental change to social conflict. Appropriate strategies of teaching and learning such as problem solving, small groups' discussions, field work, projects participation and co-operate learning should be embraced thereof. Teacher trainees in colleges therefore, should be trained vividly to handle learners in schools to be able to learn content that meets the desires of the learner and the immediate environment. The pre-service teacher training programs in the Kenyan Universities and schools should help the students develop attitudes including: accountability, social responsibility and personal care and concern for the environment (Otiende, et-al, 1992; Chang, 2011; Bednarz, 2002; Barrows, 1989).

Challenges Faced in Teaching Geography in Schools

The study sought to investigate the main challenges teachers face in teaching geography in Kenyan schools (see figure 6.1).

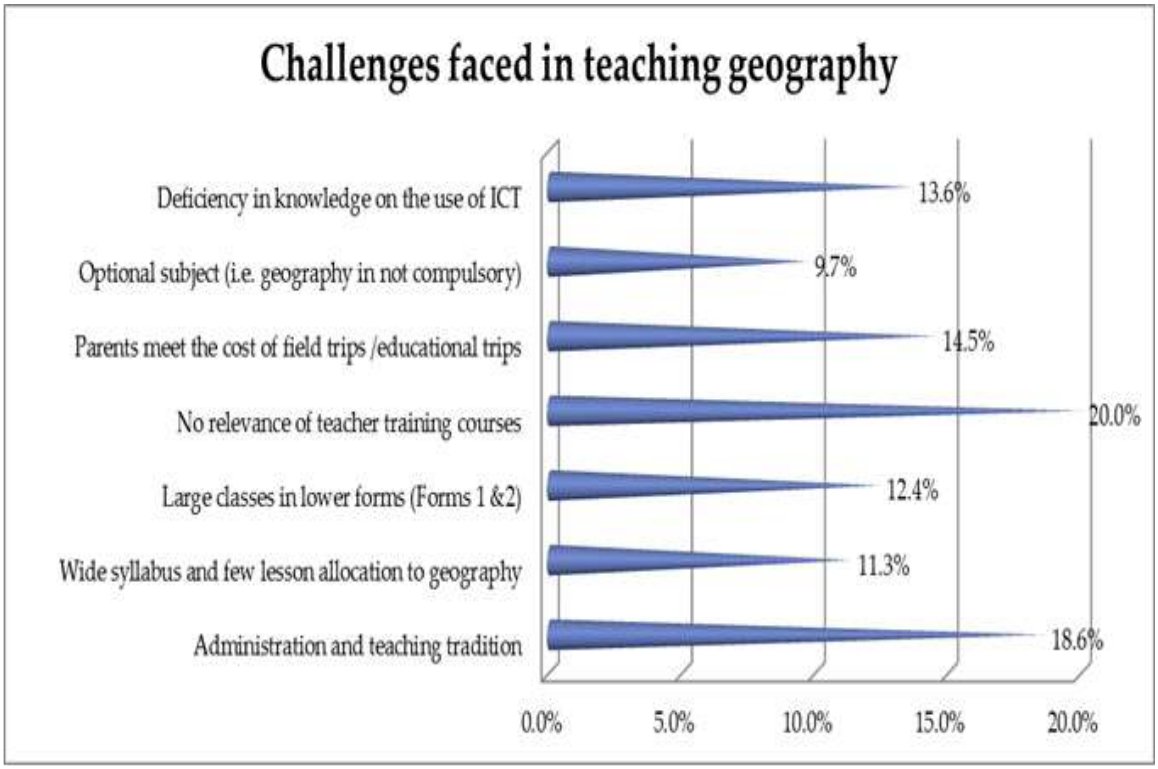

Figure 6.1: Challenges faced in teaching geography in schools, [Data, 2012].

An overwhelming 20% (87) stated that the teaching and training was not relevant to the current needs of teacher training in colleges, 18.6% (81) said that there was no support from the school administration and that there was poor teaching tradition in the school. Some of the teachers 13.6% (59) indicated they were ill equipped with use of ICT, which was not covered in college during their time of training. While 14.5% (63) claimed that parents met the costs of fieldwork and educational trips even with the free education system in place not forgetting that activity fee is paid for such requirements in the syllabus. Other challenges include: a wide syllabus with few lessons allocated to geography, that is, 11.3% (49) in Forms I and II, large classes in lower forms 12.4% (54) not forgetting that this is an optional subject 9.7% (42) in Forms III and IV.

The emerging issues of using technology to teach in the classroom, e.g. the use of GIS in Kenya schools are remarkably low that shows a decline in attitude towards geography. With the e-learning being introduced in Kenya, the teachers are disadvantaged to teach the students who may be well informed and can challenge the teacher who is expected to deliver. This is very ironical of the current system of training in the Kenyan Universities and the students are likely to lack confidence in the teacher handling the discipline without sound technological know-how.

The findings further suggest that there are several other challenges as expressed by the respondents that make the training and teaching of geography difficult in the Kenyan schools among which include:

i] Big challenge in preparing learners who can meet the needs of society in the future due to lack of the essentially required resources for training and skills of geography that add value.

The desire of society, is that students be develop so as to take action to ensure sustainable growth and development in the future.

ii] Levels of assessment**,** that is, the nature of assessment used in schools to establish if students have gained much, is in most cases based on role memorization, that is:

- Teaching and learning is structured towards academic success/examination oriented rather than career oriented.
- The level of marking approaches indicates that students perform poorly in geography paper I which is practical geography, that is, map reading and photographic interpretation than they perform in geography paper II and III, and
- Research shows that the assessment goals do not emphasize students' ability to discuss geographic problems and to construct arguments for evaluating geographical issues covered in the 31 topics covered in the Kenyan syllabus (KCSE exam papers 2007,2008, 2009, 2010 & 2011 and Kenyan Syllabus 2002).

The Preferred Strategies for Pre-Service Teacher Training

According to the pre-service teacher trainees, some of the preferred strategies should be adopted to improve on the delivery of content in schools and higher institutions of learning as indicated in Figure 7.1.

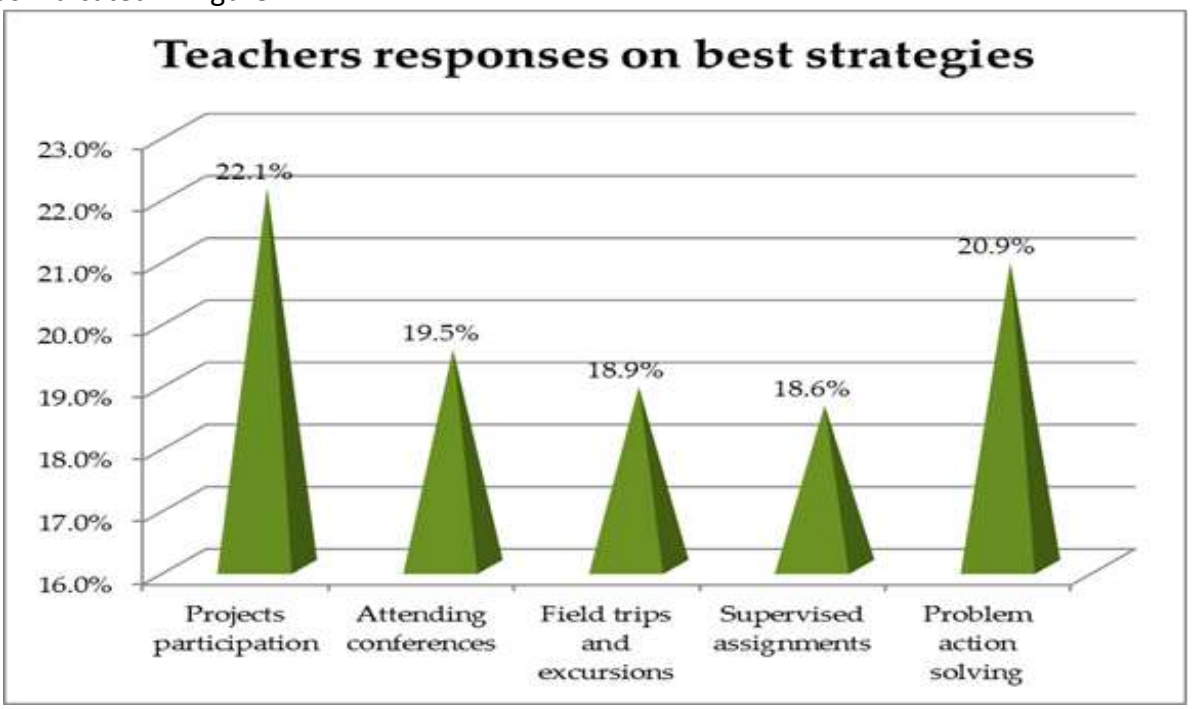

Figure 7.1: Pre-service teachers responses on the preferred strategies for teaching, [Data, 2012].

The study showed that majority 22.1% (96) of the respondents felt that the pre-service teacher trainees should participate in projects and 20.9% (91) were for problem action solving approaches. It was further revealed that there was need for attending conference attendance 19.5% (85), more field trips and excursions exposure 18.9% (82) as well as supervised assignments 18.6% (81). In essence, understanding the geographical perspectives is important because geography can be difficult to people within the family of academic disciplines and what holds the discipline together is a constructive and coherent seeking of

perspectives and ways of handling content in the classroom that brings about effective understanding of the discipline.

Researchers have argued that content and skills not mastered well give students no chance of practicing in their geographical ways of looking at the world-through its focus on place and scale (horizontal axis); just as it cuts across its three domains of synthesis, that is, human-societal dynamics, environmental dynamics and societal dipramics (vertical axis); but also in spatial representation and the third dimensions of the matrix of research in the other branches of Geography (Hagerstrand, 1970; Batonda and Perry, 2003; Cutter, 2000). Further, it is argued that if Geography is taught with a good understanding, then it will result in students developing the ability to:

a] Identify critical issues and constraints for the discipline of Geography,
b] Clarify priorities for teaching and research,
c] Establish ways of approaching existing challenges in the enrolment and discipline,
d] Link developments in geography as a science with societal needs for geography education, and
e] Respond to the challenges of interest in its rediscovery of the potential role in revolution a living society.

Indeed, the researchers further argue that strategies of teaching and learning should draw attention to content and skills that will enable the learner to gain knowledge in six areas of great concern in the discipline, that is:

i] Disequilibrium and dynamics in complex systems.
ii] An expanded concept of global change.
iii] The local-global continuum as no single society can live in isolation of other societies.
iv] Comparative studies using longitudinal data.
v] Effects of geographical technology on decision making, linkages, economic potential, prospecting and
vi] Geographic learning through critical thinking and reasoning.

This study acknowledges that the rediscovering of geography can be greatly enhanced through the approaches, techniques, strategies and methods of teaching and learning that are used in the classroom. In our professional efforts to establish a clear way of handling the discipline of geography in the classroom, there is need for society to also enhance interest in geography as a subject. It is essential to improve the knowledge base of geography as a discipline related to critical issues for science and society. Equally, there is need from all quarters of knowledge acquisition to increase the appreciation and use of geographic perspective in science and society at large and to tread geographic learning as a challenge to science as well as to practice it.

There is therefore need to refocus geography on and embrace relevant training strategies geared towards:

a] Improving geographic analysis in a new era of data and analytical tool availability, related to broadest needs of science.
b] Developing integrative, motion disciplinary, relatively large geographical research initiatives in response to priorities of science and society.
c] Increasing the use of geographic perspectives to provide scientific insights that may not be achieved in other ways, and

d] Increasing linkages between geographic research and geographic education by emphasizing research on geographic learning.

Given our training priorities at university levels, the teaching of geography is important to a classroom teacher once it is all very hands-on experience and relative in nature. The teacher has several questions to ask self on:
i] what is the goal of education?
ii] what is the role of the discipline in the curriculum?
iii] how do I go about handling the content in the discipline?
iv] what are the best strategies, approaches, techniques and methods to use in teaching the discipline to achieve the best practices?
v] what are the emerging issues in the discipline?
and
vi] what are the challenges experienced in teaching the discipline?

The idea about geographic education and classroom teaching is that geography must be made relevant with a greater focus on global issues and more specifically relevant to basic issues affecting a particular society as stipulated in its educational goals (KIE syllabus, 2002; Schwartz et-al., 2001; Henderson, nd). An interview with Mr. Anunda, a geography teacher at Nyamasosa Secondary School revealed that most teachers in the Kenyan schools are ill prepared in handling geography in schools. He argued that most teachers are not versed with using some more modern forms of teaching and integrating technology in their teaching practices due to:

- High enrolment over load,
- Limited time to handle the discipline too many topics to cover,
- Limited teaching and learning resources-accessibility compiled by scarce resources limits the teachers' sources of information for preparing,
- Teacher –preparation at college has no reference to changes in time and the emerging issues in the discipline-no refresher courses to up-date- the teachers, and
- Demanding geography syllabus-school syllabus has 31 topics to cover ranging from physical Geography practical and human geography- it is assumed that handling all the tree areas of the syllabus.

The respondents further added that most students in schools do not understand the importance of geography in their lives for these students argue that taking geography will not hand then a well-paying career as in medicine, nursing, engineering or accounting. Further probing of Mr. Nyaboga about the learners' attitudes revealed that the strategies and methods of teaching used in the classroom are very important, that is, in making geography enjoyable since teaching and learning resources are limited and most teachers with over 10 years of teaching have never been inducted with the new approaches to learning. The interviews indicated that the commonly used strategies for teaching in schools are:
i] Lecture methods to reach the largest number of students,
ii] Group work that make it easier to grade,
iii] Holiday assignments so that students can inquire during holidays for there are no school funds to take students for field trips, and
iv] Occasionally group discussions- if teacher is away on official assignment, sick orphans family matters to attend to.

When the respondents were asked what they taught about the importance of geography in the school curriculum, the teachers (93%) were in agreement that geography plays an important role in the curriculum for:

a] It is both a science and a humanity,

b] It borrows the tools of natural science and effectively uses these tools in creating knowledge in our field of geography e.g. observation technique recording categorization and analysis understanding the laws and regulations, using critical thinking and analysis to support arguments raised in geography,

c] Most of the teachers, that is, 67% felt that geography is a multi-disciplinary discipline that extends beyond its boundary to enrich the learners in knowledge about the discipline that they can use in their careers e.g. locating places, buying land, utilizing the environment for their daily survival.

d] It informs our history that geography has played an important role in the development of civilization. Essentially, the researcher in this study sees geography as the "mother" of all subjects taught in schools, where as History could be regarded as the "father" of all disciplines taught in schools.

Further, since geography as a discipline is critical in promoting economic development, improving our stewardship of natural resources, and protecting the environment, the interviewed teachers recommended that training institutions should emphasize more on the use of the following methods to equip teachers [see table 7.1]:

Table 7.1:
Modern approaches to teaching and learning

Approach in teaching	**Respond-ents**	**Perce-ntages**	**Reasons for support**
Constructivist approach	58	10.3	Gives a learner chance to learn from the environment using romantic naturalism approach
Participatory approach	37	8.5	Builds skills of teamwork and individual responsibility
Co-operative-teaching/ team-teaching	44	10.1	Instills a sense of togetherness and responsibility as a team player
Romantic naturalism i.e. fieldwork	22	5.1	Working by self to the best of one's ability to achieve great heights
Discovery method	65	14.9	Gives the learner chance to work independently
Assignment and supervised studies	62	14.3	Enable students engage in group discussion and practical experiences
Practical training in the geography lab	39	9.0	To train students to develop competencies like those of natural Scientifics
Holidays assignments	58	13.3	To develop skills of enquiry and project writing
Guest speakers	32	7.4	To enrich learners experiences
Problem action-oriented strategies	18	4.1	To identify an issue and provide solutions

N=435

Based on these responses, geographical knowledge and skills learnt must help both the pre-service teacher trainees and the learner in the secondary school to acquire useful skills that will make one realize the national goals of education (Bloom, 1956; Krathwohl, Bloom and Masia, 1973; Vygotsky, 1973; World Bank; 2007). The academic endeavors in the discipline ought to provide coherent narrative that prepares the teachers to handle context within the requirements of the syllabus (Wiggins and Tighe 2005; Ian and Cnah, 2008; Hangerstrand, 1970; Fink, 1979). Researchers in the field of geography have acknowledged that geographical content taught in schools should prepare accurately the learners' image of the condition of the great world stage and so to help them think on how they can stand at some point, marvel the beauty of the world around them, then ask themselves on what they can do to make the world a good place to live in both: economically, politically or in solving the social problems existing therein (Ondigi, 2002; Lidstone and Stoltman, 2007; De Ferranti et al., 2003).

The teacher training programs in the Kenyan universities and the Kenyan schools should help the students develop attitudes including accountability, social responsibility and personal care and concern for the environment (Otunga, Odero and Barasa, 2011; Savin-Baden, 2000; Shiundu and Omulando, 1992; Chang, 2011). The author further argues that the teaching of geography should provide opportunities for teacher to move students from an awareness

phase into a taking action phase assuming that the values are well learnt. This is a case that requires pre-service teacher trainees to be versed with the more appropriate teaching strategies that include: problem action-solving strategies, discovery approach, assignment and supervised studies, fieldwork and action oriented approach to teaching and learning (Scardamalla and Bereiter, 2003).

Recommendations on How to Improve the Training, Teaching and Learning of Geography

This study recommends that best training, teaching and learning practices be carried out with the objectives of developing effective and efficient systems that promote the interests of the pre-service teachers in their careers and the learners' ambitions to meet the expected goals of education in which:

i] Geography should be developed to ensure that our students are engaged in the knowledge, skills, values, and actions that respond to emerging issues in the society.

ii] There should be a reviewed curriculum that is of interest to the learners to curb the problem of declining enrolment in geography, and practices that do not enhance practical learning.

iii] There is a developed working system for teachers on sharing knowledge, discoveries and ventures of the best practices in the field of geography teaching aimed at improving their career practices.

iv] Teachers learn to be reflective agents of change through belief practices, inspire students they teach and should be committed partners in bringing change and improvement in the discipline.

v] Universities devise ways of handling large numbers in the classroom in order to avoid practices that make it easier for the teacher to handle large classes.

vi]The education system acknowledges the relevance of geography and thus makes it a compulsory subject to all learners in schools.

Conclusion

It can be concluded that training and teaching practices at university levels and in schools cannot be divorced from each other. In today's modern forms of teaching geography, both trainees and learners should be in a position to evidently:

a) Acquire knowledge by self, which is, having been lined up by the lecturer so as to understand issues and be able to apply the knowledge and skills in life;
b) Upon their own efforts, gain knowledge, understanding and experiences by working on activities and assignment supervised by the lecturers/teachers and engaging often in fieldwork activities and discovery expeditions in order to perfect their working skills;
c) The process of learning must model crucial aspects of critical thinking, reasoning, observations and research for the learners to claim authority in knowledge and working skills necessary in today's labor market.

Further, this study concurs with Margeston (2001); Barret (2001) views on training that support practical forms of teaching that enhance practical learning and research skills. The authors argue that learners should have ideas of what they want to learn and ought to establish facts and understanding of the topics coupled with a philosophical understanding of how the content will assist one in developing a deep understanding of issues learnt. An

effective understanding of knowledge and skills will result in the learner developing action plans in handling issues in life.

On the other hand, Barret (2001) specifically argues that the use of problem based learning [PBL] which the researcher herein regard as a more practical approach to learning should be embraced by the Kenyan Universities involved in pre-service teacher training for it will enhance the learner's ability for:

i) Acquiring skills to learn and articulate issues better,
ii) Developing high retention rates,
iii) Developing creative and innovative thinking skills,
iv) Developing key skills relevant to employment e.g. interpersonal communication skills, information seeking skills, and presentation skills,
v) Fostering professional competence and confidence together with professional identity,
vi) Mirroring in the inter-disciplinary team processing skills that the graduates will bring to work and research,
vii) Facilitating skills of learning how to learn,
viii) Integrating knowledge from different disciplines, and sources,
ix) Linking theory and practice in the field of study,
x) Having a sense of belonging and friendship in society,
xi) Fun in the discipline for geography is all about excursions,
xii) Operational form of a philosophy of learning that is student-centered and problem-focused,
xiii) Ability of responding to research evidence on the benefits of PBL,
xiv) Increasing competitiveness in the higher education market,
xv) Potential to hit the floor running at work after graduation, and
xvi) A new look at the teaching and learning of geography for it is intended to infuse new thinking that would instill new practices in the learner for a better tomorrow.

It is evident from the on-going debate in this paper that the training of pre-service teacher trainees in the Kenyan Universities need to adapt to the new thinking and training practices world-over so as to give the discipline of geography a rightful place in the creation of knowledge and its contribution to the development of man and the environment. There is need therefore for institutions of higher learning in Kenya to formulate policies of training that enhance a comprehensive framework of training that reflects on the individuals and the new job market skills. In particular, this study recommends the American Humane Association (Parry & Berdie, 2004) model of training as outlined here below (see figure, 9.1):

The issue of the impact of other events is critical in the decision-making about which levels of evaluation to conduct and the design of the evaluations.

Figure 9.1: The AHA levels of evaluation. [Source: Parry & Berdie, 2004].

The institutions should observe that the first level of training should include the evaluation of the training itself: content, structure, methods, materials, and delivery. It may also include evaluation of the adequacy of the outcome measurement tools to be used. The course level evaluation is conducted to guide revisions and refinements to the training in order to maximize its quality and relevance and the attainment of desired trainee competencies. The second level of satisfaction measures the trainees' feelings about the trainer, the quality of material presented, the methods of presentation, and environment of training. Level 3 which is on opinion refers to the trainees' attitudes toward utilization of the training (e.g., their perceptions of its relevance, the new material's fit with their prior belief system, openness to change), as well as their perceptions of their own learning.

The 4th level which is on knowledge acquisition refers to such activities as learning and recalling terms, definitions, and facts and is most often measured by a paper and pencil, short answer (e.g., multiple choice tests). The 5th level, that is, knowledge comprehension includes activities such as understanding concepts and relationships, problem solving and recognizing examples in practice. The 6th level is build on skill demonstration which refers to using what is learned to perform a new task within the relatively controlled environment of the training course. It requires the trainee to apply learned material in new and concrete situations. This level of training and evaluation is built in the classroom experience, providing both opportunities for practice and feedback to the trainees. Level 7 is on the skill transfer that focuses on evaluating the trainees' performance on the job. This level requires the trainee to apply new knowledge and skills in situations occurring outside the classroom. This level ensures the participant's action plans, case record reviews and observation measures have been effectively used in the training and learning processes. Finally, the last three levels reflect the relationship between the teacher as an agent of change, the learner's role in providing services and the society's appreciation of education as a means to bring change in the environment.

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