

Quality of Secondary Schools Trained Geography Teachers in Universities and Diploma Colleges in Pedagogy

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Abstract

There has been a concern about the quality of secondary schools teachers being prepared and produced by University and Teachers Training Colleges especially in pedagogy and use of instructional resources which is naturally and technically a pedagogical issue. The study was guided by Shulman's concept of pedagogical content knowledge. A total sample of the study was ten (10) secondary schools, ten (10) Heads of department, fifty (50) Geography teachers and five hundred (500) Geography students. Schools, Geography teachers and Heads/Chairs of departments were purposively selected while form three (3) and form four (4) classes were selected by simple random method. The researcher used a descriptive cross-sectional survey research design involving both qualitative and quantitative methodologies. Data were collected using questionnaires for Geography Teachers and interview schedules for Heads/Chairs of departments, observation schedules, and resources checklist. The major findings were most of University trained Geography teachers were not competent enough in pedagogy and faced difficulties in utilization of educational technology in teaching/ learning process which included: insufficient knowledge of meaningful instructional activities, fewer lessons in the timetable as recommended by the ministry, inadequacy of teaching/learning resources, examination oriented programme, cheating and inadequate teacher professional development in Geography. It was also noted most of TTCS trained teachers had been effectively oriented on the use of instructional resources but follow-up a mechanism like in-service training was inadequate. Based on research findings, the study recommended that Geography teachers should be in-service in the use of practical approaches and at least have six lessons per week to enable them to cover syllabus on time. It was also recommended that the ministry of education modernize all secondary schools in Kenya by technologizing them to make them tandem with the expectation of modern education. In addition, it was further recommended that most of the Geography departments should have Geography rooms which should be well equipped.

Keywords: Competency, Quality, Pedagogy, Instructional Resources

1.1 Introduction.

Over years educational accountability has been a prominent topic for discussion and debate in social, educational and political arenas across the world. Studies done in Australia, United State of America, Europe and other parts of the world shows that low degree of achievement in many educational reforms has been a major reason why teachers' instructional beliefs and principles underpinning innovation in teacher education need to be understood and taken seriously, otherwise reforms would remain artificial and cosmetic. Report by Thomas (2001) on quality teaching suggest that most states are not doing an adequate job of preparing teachers for today's classroom.

In Mackey Report 1981, from the time 8.4.4 system of education was introduced in Kenya, Geography was regarded as a compulsory subject in secondary schools; form one to form four up to 1992. Kamunge report 1988, noted that school curriculum was loaded and thus its objectives were never attained and therefore, the commission recommended lessening of school subjects which lead to Geography remaining as core subject only in form one and two (Muricho and Changách Koskey, 2013).

In primary schools it was familiarised in the early 1980s, since then it was taught as a traditional subject until early 2000s when it was integrated into social studies. It is now examined by Kenya National Examination Council (KNEC) as an integrated subject in primary schools and primary teacher training colleges (PTTCS) and as traditional separate subjects in secondary schools and some higher learning institutions (Dan, 2010).

In recent years there has been a concern to study the influence of teachers in curriculum execution and their instructional beliefs. Many educators claim that the beliefs held by school Geography teachers shape their ability to seek and acquire skills, knowledge, and attitude to perform their pedagogical tasks. If educational changes have to be attained there is more to be done rather than mere transfer of instructional resources and media to schools (Roehrig, Kruse and Kern, 2007). New trends in education which include learner-centred methods and autonomous learning, according to Kohn (2000) on his study of Teacher education and their problems worldwide advises that the programmes need to be re-designed and modernized to produce school teachers who recognize the role of a learner in instructions process.

Emerging educational reforms however is one issue that is recognized as important for all education stakeholders in regards to the relationship between effective teaching and students learning. Lee (2013) encouraged teachers to embrace change as they consider the most effective ways to prepare future leaders. He reminded his audience that "better teachers lead to better schools. Better schools lead to better children. Better children lead to better democracy."

Public Secondary schools in Kenya need competent teachers who have the ability to pioneer instructional development through instructional technology to guide and equip students with 21st-century skills of globalization (T. Education and Skills, 2010). However, according to Genvieve (2017), the crucial question of discussion on her study was, 'was the present crop of teachers produced by Kenyan universities adequately prepared in pedagogy to meet the development of the skills and needs to the learner they would teach after their training?' This is because in Kenya there is a strong feeling that University and teachers training colleges (TTCS) are not preparing and producing competent professional Geography teachers to serve the technological development for instructions.

Notwithstanding, the performance and ability of the Geography teachers to use learning/ teaching resources largely depend on the type of training she/he received in teacher professional development. There are three main components that quality education largely depends on, namely, relevant and wide use of educational resources, physical facilities and competent teachers (Ko, Sammons and Bakkum, 2014). However, the inter-relationship between the three components is not easily noticeable. To prepare and produce a competent Geography teacher in pedagogy it involves professional development fully versed in the selection and use of instructional resources.

A Geography teacher who is versed in development and administration of educational materials and if a need arises, in absence of such resources he/she will never sit back but go out of his/her way to improvise and put the resources in use. Competent Geography teacher should be in a position to access and use available teaching/ learning resources for instruction through improvisation. For efficient use and safety of instructional resources, physical facilities are required. Provision of competent and educated teachers versed with knowledge, skill, and attitude is the most important thing that the ministry of education in Kenya can give to the secondary schools in the country (Genvieve, 2017).

According to Genvieve (2017) and Kafu (2014) on their studies, ninety percent (90%) of teachers in secondary schools in Kenya are university graduates. Most scholars believe that school teachers prepared in the universities are more creative and innovate basing the argument on the fact that prospective teachers are prepared by the best brains in the land and universities are cradles of sophisticated knowledge than the teachers prepared in Diploma Teacher Training Colleges.

In addition, they argued that most universities their physical facilities are well equipped and have the required instructional resources. Given that the majority of secondary school teachers are University graduates, there was a need to design and conduct research on comparative study on trained teachers in Universities and TTCS teaching in secondary schools in Kenya. Hence there is interest to determine their quality of teaching and specifically their competency in pedagogical related issues for Geography in secondary schools in Mwea East Sub- County, Kirinyaga County, Kenya.

1.2 Problem Formulation.

Modern society expects Geography school teachers to be competent in pedagogy and in the utilization of instructional resources for instructions. In the modern world, competent school teachers should be a solution to emerging technologies in modern education. The critical question in this juncture is "Is the present crop of Geography trained teachers in secondary schools well equipped for the difficulties posed by developments in the emerging educational technologies in instructions?" This poses a concern on the competency of schools teachers being prepared and produced in pedagogy by the universities and TTCS across the curriculum and teaching in public secondary schools in Kenya.

It is in the basis of this realization that the present research on comparative study on teachers trained in universities or Diploma Colleges in pedagogy and use of instructional resources for Geography was designed, developed and conducted for secondary schools in Kirinyaga County, Kenya to fill this knowledge gap. Specifically, the study investigated the quality and competency of trained Geography secondary school teachers in pedagogical issues in Mwea East Sub- County.

The study, therefore, focused on the following objectives;

- i. Establish the quality of Geography teachers in pedagogy in the selected secondary schools in Mwea East Sub-County.
- ii. Examine the procedure used by Geography teachers in the utilization of some of the educational technology.

1.3 Theoretical Framework.

The study was steered by Shulman Lee, 1987, model of knowledge growth in teaching (Shulman, 2012). Shulman introduced the concept of pedagogical content knowledge known as PCK which raised the issue to what teachers should know and be able to do. He developed an idea of going beyond content or subject matter knowledge to include how to teach particular content.

He also stated the knowledge that makes a discipline easy or difficult to learn. In order for teachers to teach effectively, they need to know the potential problems learners experiences basing on their ages and backgrounds. In the understanding of content related

material PCK involves the use of effective and cognitive domains. Teaching any discipline is a highly complex cognitive activity in which trained teacher must apply knowledge from various domains.

To understand the interaction between the teachers, learners, environment and instructional resources Koehler, Mishra, Kereluik, Shin and Graham (2014) built on Shulman's notion of Technological Pedagogical Content Knowledge (TPCK), which involves an understanding of the complexity of relationships among students, teachers, knowledge, content, and technologies. According to the educational technology comes with its own biases and affordance that makes some technology applicable than others. According to Enqvist (n.d.), this theory is relevant to the study as it deals with issues related to effectiveness and competency of trained teachers in pedagogy and utilization of educational technology.

Therefore, the adopted theory formed the main basis of the study since it focuses on pedagogy and use of instructional resources that were the focus of the conducted study. This theory provided the framework based on previous studies and therefore it assisted the researcher in planning for data collection and analysis concerning difference and/or relationship of trained Geography teachers in Universities or in TTCS in pedagogical issues and classroom practice in secondary schools in Kenya. That is, the selected theory was quite relevant to the present study as it facilitated the in-depth study of the problem.

2.1 Quality and Competency of Geography Teachers in Pedagogy.

According to Kafu (2014), primary schools teacher are well prepared in pedagogy than their counterparts in secondary schools. He examined how to prepare a teacher in education technology and professional development in the utilization of instructional resources at the elementary level which is naturally and technically a pedagogical issue. Primary trained teachers in Primary Teacher Training Colleges (PTTC) in other word are more competent in pedagogy than teachers trained in TTCS and Universities.

Anyiendah (2017) established poor performance in the teaching of English in primary schools in Kenya as a reflection of poor preparation in the pedagogy of these teachers from their respective teacher training institutions. She noted English teachers were not well prepared in pedagogy to be competent in teaching the subject at school level. The findings by Genvieve (2017) echoes her findings in relation to prospective teacher training in pedagogy in Kenyan Universities and that of Kafu (2014) in the development and utilization of instructional resources at elementary education in Kenya.

Teacher education is critical as it set the development agenda of any society. Through the produced teachers, teacher education programme serves as the source of the required competencies for the development agenda of any society (Noe, Hollenbeck, Gerhart and Wright, 2006). The programme focuses on the development and growth of competency school teachers and prospective learners so as to develop their love for education and interest in the teaching profession and learning process respectively. In 1975 the Daily Nation Newspapers had a very simple and clear heading "Teachers have again failed the nation". The message here was about the quality and performance of school teachers either they lacked professional competencies or they did not know how to teach school children to prepare them to pass their examinations. In 1996, the same concern was raised in relation to the quality of Kenyan university graduates, where were claimed to produce "half-baked" products (Genvieve, 2017).

In some of the universities and TTCS, teacher preparation programme is a complex scenario. Some of the individuals involved in teacher training are not "trained and qualified" teachers thus not a specialist in Teacher education and are directly involved in preparing school teachers in professional areas. These create complications in preparing professional teachers in pedagogy and those they serve later in secondary schools. In response to the above observation, Kafu (2013) propose pedagogical competence since teachers are the basis of creativity and innovation in education. Hence preparation and production of ill-prepared teachers in pedagogy may originate from the manner Teacher education programme is designed and organized in Kenyan Universities and TTCS.

Notwithstanding, the study was done by Eshiwani (1992) regarding the poor state of teaching and learning of Mathematics in Machakos district shares the same sentiments of which is attributed by poor preparation of Mathematics teachers in pedagogy.

Studies by Genvieve (2017), Anyiendah (2017), Nyerere (1967), Kafu (2013), Lelei and Weidman (2012) and (Ominde, 1964) all these authorities demonstrate the need for and the importance of pedagogy in advancing development in the society. To them, all these developments are facilitated by teachers who are well placed to play these critical roles of creativity and innovativeness in the society. In his publication on Education for self-reliance Nyerere (1967) emphasized on re-training of teachers in pedagogy to adjust them to new philosophy and practices in education in order to serve the needs of the learners.

All reviewed authorities show that most of these Universities and TTCS teachers are ill-prepared in pedagogy. From the above researches, there is one important fact that preparation of secondary school teachers at Universities and TTCs levels in Kenya is wanting. This is well demonstrated at annual KNEC reports in the specific subjects that show a deplorable performance of the candidates.

2.2 Procedure used by Geography Teachers in Utilization of Educational Technology.

Learning resources are materials that the facilitator and learner use in the teaching/learning process for effective instructional objectives. The term learning resource is used by various scholars interchangeably with educational media, teaching material, educational technology, audio-visual material, and instructional materials. For Geography teacher to accomplish his/her lesson

objectives she/he needs to have a wide range of teaching equipment and materials for learners motivation (Arends and Castle, 1991).

According to Ramsden (2003), learning resource is any source of information that both the teachers and students use for expressive and operative instructions. This resource includes; textbooks, audio-visual, computers, still pictures, televisions, radio, charts and maps, flip charts, field trips among others. The weakness or skills of students in a classroom cannot deter an individual learner from effective learning using a computer thus a computer allows every learner to learn through her/his own pace without being affected by others pace.

It is important to note educational technology saves time in the teaching and learning process. In learner-centered approach (LCA) the teacher is simply a facilitator of instructions thus no longer treated as the only source of information, therefore, he/she can organize students to achieve specific learning objectives by use of a wide range of educational materials (Keller, 1987). Traditional materials such as real objects, chalkboard and hand-outs can also be used to facilitate student attainment on instructional objectives.

In addition, instructional media assist learners to discover themselves and realize their aptitudes. Knowledge, skills, values, and attitude are enriched by the use of teaching materials and thus cultivating the information illiterateness (Sampath, 1981). Critical awareness of the teacher contributes to the effective use of instructional media on what the material can or cannot do. Proper use of educational media in and out of the classroom as an essential part of planned training guarantee attainment of instructional objectives (Earle, 2002). The learner is able to respond to questions, retain knowledge, follow instructions directed by the teacher when a variety of teaching materials are used (Sampath, 1981).

For the purpose of the study, the following resources have been used in training teachers in pedagogy in teachers training colleges and Universities and used in teaching and learning process in secondary schools in Kenya. These include print material such as textbooks, non- projected materials (chalkboard, models), and projected media such as computer and community resources such as field trips. According to Bednarz (1994) spatial distribution of occurrences on the earth's surface and their interrelationship influence social activities thus Geography teachers describes the location of teaching resources in the environment to enable a learner to comprehend the importance of the surroundings. Most scholars despite having different definitions agree that instructional technology assists in effective and efficient teaching and learning process but what matters most is the procedure of utilization.

3.1 Research Methodology.

In this study, the researcher used the descriptive study as it focuses on the description of the observed phenomena which involves both qualitative and quantitative methodology to obtain useful data in evaluating the representative selection of the population. The design was used to establish the factors that influence the competency of a school teacher in pedagogy and prospective learners in Kenyan secondary schools.

The focus was to determine the causes of existing differences or/and relationship in the status of the groups of individuals involved in the teaching process. The researcher adopted two techniques for the study; purposive sampling technique and random sampling technique. In this respect, the study population comprised of twenty four (24) public secondary schools in Mwea East Sub- County. The researcher sampled Geography teachers, students and Heads of the department from the ten (10) selected schools, through random sampling technique ten (10) Heads of department, fifty (50) Geography teachers and five hundred (500) students were sampled.

4.1 Finding and Discussion.

This chapter presents results of the study conducted in public secondary schools in Mwea East Sub-County, Kirinyaga County, Kenya on the comparative study on the competency of trained Geography teachers in Universities or TTCS in pedagogy and use of educational technology. The results are based on the analysis of data collected using a questionnaire for Geography teachers and the interview schedule for Heads of Department as well as observation schedule and resources checklist. These instruments comprised three main parts; personal details, common items applicable to all respondents and the main body of these instruments.

4.2 Quality and Competency of Geography Teachers in Pedagogy.

In a related investigation on their general view on the quality of Teacher Preparation programme, an item was designed focusing on suitability and relevance of the courses offered by schools of education in training institutions.

Table 4. 1: Relevance of the offered courses in the Universities and Diploma training colleges.

Respondents	Gender	Education level	Relevancy	Frequency	Percent	Valid Percent	Cumulative Percent	
Geo Teachers	Male	Degree	Relevant	4	16.0	16.0	16.0	
			Not Relevant	14	56.0	56.0	72.0	
			No Opinion	7	28.0	28.0	100.0	
		Total	25	100.0	100.0			
		Diploma	Relevant	4	28.6	28.6	28.6	
			Not Relevant	9	64.3	64.3	92.9	
			No Opinion	1	7.1	7.1	100.0	
	Total		14	100.0	100.0			
	Female	Degree	Not Relevant	4	50.0	50.0	50.0	
			No Opinion	4	50.0	50.0	100.0	
			Total	8	100.0	100.0		
		Diploma	Not Relevant	2	66.7	66.7	66.7	
			No Opinion	1	33.3	33.3	100.0	
			Total	3	100.0	100.0		
HODs			Male	Degree	Valid	Not Relevant	5	100.0
	Relevant	1		50.0	50.0	50.0		
	No Opinion	1		50.0	50.0	100.0		
	Female	Total	2	100.0	100.0			
		Degree	Valid	Not Relevant	2	100.0	100.0	100.0
		Diploma	Valid	Relevant	1	100.0	100.0	100.0

Analysis on table 4.2 shows that a proportion of 4 (16.0) male degree trained teachers and 4 (28.6) male diploma trained teachers thought the offered courses were relevant while 14 (56.0) male and 4 (50.0) female degree trained teachers and 9 (60.00) male and 2 (66.7) female diploma trained teachers thought otherwise. In addition, 7 (28.0) male and 4 (50.0) female degree trained teachers and 1 (7.1) male and 1 (33.3) female diploma trained teachers and/or could not comment on the quality of the courses.

Of great interest, was the Heads of Departments' views were similar to those expressed by Geography school teachers. Only 1 (50.0) male and 1 (100.0) female diploma trained Heads of Department indicated that the offered courses were relevant for teacher preparation. In addition, 5 (100.0) male and 2 (100.0) female degree trained Heads of Department said courses offered were not relevant but only 1 (50.00) male diploma trained Head of Department said was unable to comment on this matter. This creates a dilemma for a modern school teacher preparation who are expected to play a role of assessing and accommodating individuals' academic, intellectual and emotional needs prepared in Kenyan universities as advocated by (Genvieve, 2017).

This observation is worrying if an individual produced by Kenyan universities indicate that the quality of teacher preparation from Kenyan universities is poor. Therefore, it right to claim that Kenyan universities produce "half-baked" graduates.

Table 4. 2: Quality on professional areas based on sex and category of School Teachers.

Gender	Education level	Training Status	Frequency	Percent	Valid Percent	Cumulative Percent	
Male	Degree	Valid	Content/ Teaching subjects	22	73.3	73.3	73.3
		Professional/ Pedagogical area	8	26.7	26.7	100.0	
		Total	30	100.0	100.0		
	Diploma	Valid	Content/ Teaching subjects	14	87.5	87.5	87.5
		Professional/ Pedagogical area	2	12.5	12.5	100.0	
		Total	16	100.0	100.0		
Female	Degree	Valid	Content/ Teaching subjects	1	10.0	10.0	10.0
		Professional/ Pedagogical area	9	90.0	90.0	100.0	
		Total	10	100.0	100.0		
	Diploma	Valid	Content/ Teaching subjects	1	25.0	25.0	25.0
		Professional/ Pedagogical area	3	75.0	75.0	100.0	
		Total	4	100.0	100.0		

When the analysis was done on the basis of sex and category on table 4.3, depending on their training, 9 (90.0) female and 8 (26.7) male degree trained teachers and 3 (75.0) female and 2 (12.5) male diploma trained teachers indicated effectiveness in pedagogical/professional area of their training while 22 (73.3) male and 1 (10.0) female degree trained teachers and 14 (87.5) male and 1 (25.0) female diploma trained teachers indicated competency in content/ teaching subjects. This observation is not surprising since female teachers are most likely to take interest in pedagogical courses in training unlike their male counterparts (Magolda, 1997).

Apart from the above investigated general view aspect of teacher preparation programme, the study also attempted to determine the competency and effectiveness of pedagogical process in Mwea East Sub- County secondary schools, the number of Geography lessons being taught regardless the other subject combination by individual teacher, teaching workload and the requirement for individual to prepare for a lesson. An item in teacher questionnaire and Observation schedule was designed, developed and used to investigate the effectiveness and efficiency of teaching pedagogical issues in secondary schools.

4.2 Procedure used by Geography Teachers in Utilization of Educational Technology.

It is an established fact that teaching and learning resources are the forces behind effective instructions and development of quality education in secondary schools in Kenya (Okoth, 2015). This item regarding procedure used in the utilization of instructional resources provides the desired conducive environment for preparing competent learners in a competent education system. Educational resources are the software as well as facilitators of efficiency and effectiveness in the conduct of learners programme not only in secondary schools level but also at any other level of learning in the education system.

This item focused on availability, the procedure of utilization, suitability and status of instructional resources for preparing prospective learners in secondary schools in Mwea East Sub- County in Kirinyaga County, Kenya. Analyses of the data collected on the relevant items yielded the following results. On a global dimension, educational resources are critical in the preparation of anticipated learner of the modern school.

Table 4.4: Availability and adequacy of educational resources

Schools		Frequency	Percent	Valid Percent	Cumulative Percent	
Girls	Valid	Strongly agree	3	23.1	23.1	23.1
		Neither agree or disagree	1	7.7	7.7	30.8
		Disagree	7	53.8	53.8	84.6
		Strongly disagree	2	15.4	15.4	100.0
		Total	13	100.0	100.0	
Mixed day	Valid	Strongly agree	4	11.4	11.4	11.4
		Agree	2	5.7	5.7	17.1
		Neither agree or disagree	8	22.9	22.9	40.0
		Disagree	20	57.1	57.1	97.1
		Strongly disagree	1	2.9	2.9	100.0
Day/Boarding	Valid	Total	35	100.0	100.0	
		Strongly agree	2	16.7	16.7	16.7
		Agree	1	8.3	8.3	25.0
		Neither agree or disagree	2	16.7	16.7	41.7
		Disagree	5	41.7	41.7	83.3
		Strongly disagree	2	16.7	16.7	100.0
		Total	12	100.0	100.0	

On availability and procedure of utilization of educational media, the analysis on table 4.4 reveals that, 23.1 of Girls' boarding school teachers, 11.4 of mixed day school teacher and 16.7 mixed day and boarding school teachers- respondents strongly agreed and reported that teaching resources were readily available and adequate for their use in classroom instructions. However, a large proportion of 53.8 Girls school teachers, 57.1 mixed days and 41.7 of mixed day and boarding school respondents disagreed and revealed that the instructional resources in the selected schools were not available and adequate for use.

However, the findings from the observation schedule provided a clear spectrum on the procedure used on available teaching and learning resources for classroom instructions. From the tool, it was established that there were three (3) main instruction resources for use in learners' preparation in Mwea East Sub- County secondary schools, which include: teachers' book material, globe, and topographical maps. This list of resources more or less tallied with those provided in the resources checklist.

There was noticeably absent of Geography laboratory/ resources center, computers and their accessories, records on fieldwork and library. These are essential resources for the development of individual learning practices and reading habit. Consequently, the quality of learners being produced by these secondary schools is not modern enough to perform in this highly technological era. This observation confirms what Kafu (2014) observed on use of ICT for teaching and learning process.

However, a large proportion of respondents as illustrated on the table below either felt that these educational resources are inadequate or unable to use or had no opinion on this item is a worrying situation. This large proportion to ignore is a clear indication that secondary schools in Mwea East Sub- County lacks the essential educational resources for preparing anticipated learners and therefore may be producing learners who are not competent enough thus affecting their KCSE performance.

A general view from Heads of the department is that Geography school teachers in Mwea East Sub- County do not have adequate skills to use educational resources to conduct efficient classroom instructions. This is a clear indication that Geography teachers are crippled in the quest for preparing and producing the desired quality learners in secondary schools in Kenya. According to Kafu (2014), Kenyan secondary schools are not producing competent learners because teachers teaching them are not adequately equipped for the task

Table 4.5: Procedure of Utilization of educational resources

Respondents		Frequency	Percent	Valid Percent	Cumulative Percent
Geo Teachers	Valid	Introduction	22	44.0	44.0
		Demonstration	14	28.0	28.0
		Illustration	3	6.0	6.0
		None	11	22.0	22.0
		Total	50	100.0	100.0
HODs	Valid	Introduction	2	20.0	20.0
		Demonstration	1	10.0	10.0
		None	7	70.0	70.0
		Total	10	100.0	100.0

In addition, table 4.5 shows that a large number of (22) teachers only utilized the available teaching and learning resources in the first ten (10) minutes of the lesson introduction, surprisingly 70 percent of HODs did not utilize teaching resource for classroom instructions. The researcher listed the following items as instructional resources in the selected public secondary schools (globe, topographical maps, charts, chalkboards, teachers’ book material, and computers).As observed without incorporating these instructional resources in classroom instruction across the forty (40) minutes, preparation of prospective learners in secondary schools in Kenya is likely to remain wishful thinking and untenable in this goal as Kafu (2014), Genvieve (2017) and Peterson (2000) have observed classroom instructions in the developing world.

It is worth noting that most of the listed items were mainly found in Girls boarding secondary schools with a proportion of 23.1 percent. Followed by 16.7 percent of those who strongly agreed and 8.3 of the respondent who just agreed in Mixed day and boarding schools. Mixed day schools had a lower proportion of 11.4 percent of those who strongly agreed and 5.7 percent of those who just agreed on resources availability. These are institutions which may not be having the capacity to develop some of these resources for classroom instructions. On the other hand, 7.7 percent of respondents in Girls boarding schools, 22.9 percent of respondents in mixed day schools and 16.7 percent of mixed day and boarding schools respondents had no idea about these educational materials. This observation sharply contrasts with that was established in the analysis of the teachers training status. This variation in opinion could be attributed to the experience these two groups of respondents had with educational resources from their universities/ diploma colleges of training. Teachers are the designers and users of these items for instruction; they are trained in them and have had much longer exposure to them than their learners. The absence of teaching material is perhaps the underlying cause of poor utilization. The checklist was designed and developed to provide qualitative data on the state and status of the available instructional resources for preparing prospective learners in pedagogy in Mwea East Sub- County secondary schools. Besides, this tool was meant to confirm the information provided by respondents in the questionnaire and on the observation schedule.

5.1 Conclusion and Recommendations.

The study data established the following findings related to the quality of Geography trained teachers in the universities or diploma teachers training colleges and their competency in pedagogical issues; There are various probable challenges facing Geography teachers and in particular, Kenyan Universities trained teachers in education management in general and in particular quality of pedagogical courses. From the above findings, there is little or no facilitation provided to Geography department and in particular to Geography teachers in terms of financial resources, instructional resources, and in-service programmes to facilitate proper preparation of anticipated learners in pedagogy. In addition on the basis of the established findings, the practice structure and duration of administering pedagogy in secondary schools in Mwea East Sub- County are not efficient and appropriate thus compromising the crop of learners produced as "half- baked" individuals. Further, there is inadequate, irrelevant, outdated and inappropriate teaching and learning resources for pedagogy and the status of some of these available instructional resources in Mwea East Sub- County secondary schools is deplorable. The following recommendations were made basing the argument on the study conclusions. All personnel involved in the teacher training programme should be teachers in the profession. They should be qualified teachers especially in pedagogical issues and in particular in Kenyan universities if Kenya has to have competent teachers teaching in secondary schools. Therefore, there is a need to review the existing structures and practices of conducting teacher education. The adopted four lessons in Geography per week should be extended by one or two lessons in a week. This is necessary to enable teachers to cover the Geography syllabus effectively and on time. It was further recommended the Ministry of Education should develop and supply relevant educational resources and in particular for Geography subject for administering efficient classroom instruction and particularly learner-centered teaching practice. This will ensure the preparation of competent learners in secondary school level. Ministry of education should modernize all secondary schools in Kenya by technologizing to make them tandem with the expectations of modern education in general and in particular instructional technology.

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