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Abstract
This study sought to analyze the constraints in acquisition and use of non-projected media resources in teaching Geography in public secondary schools in Koibatek S. A sample of 70 Geography teachers, 35 head teachers and 314 students were sampled using purposive and stratified random sampling. Data collection was done by use of questionnaires, observation and content analysis. Data was analysed using descriptive statistical methods. The results were then presented in pie charts, graphs and tables. The study established that most schools had non-projected resources, though a limited supply and were rarely used. However, some schools lacked some important resources such as Geography rooms, facilities for fieldwork, weather station and library services. Constraints emanating from heavy workload, heavy curriculum and inept administration were found to undermine to effective use of these resources in teaching Geography. The study has recommended for an urgent review of curriculum and increased supervision to ensure that curriculum is hilly implemented, and refresher courses be given to teachers on the use of these resources There have been concerns over declining performance in Geography at national examination, especially areas that test students’ knowledge of field work, map work and physical Geography. Coincidentally these are the areas where non-projected media resources are most used. Yet few studies done in Geography have not adequately examined the non-projected media resources despite their critical role in the teaching of Geography.

Key Terms: Constraints, Non-projected media resources.

Article Citation (APA)
1.0 INTRODUCTION

This study focused on non-projected media resources in the teaching of Geography in public schools in Koibatek district, Kenya. Geography as a field of study helps society to make sense of the environment and further develops in them an understanding about why places differ (Lang’at, 2016). The significance of Geography among school going children is embedded in the fact that it enables them not only in understanding their environment but also how the environment can sustainably be used for the benefit of both present and future generations.

While Geography as a field of study has been taught in many parts of the world for several centuries, in Kenya, it started with the introduction of formal education in early 20 century (Lang’at (2016). As a subject, Geography is well developed in secondary schools and tertiary institutions of learning. Osakwe (1994) observes that the teaching of Geography over the years has changed. He argues that while initially the teaching of Geography concentrated more on location of features, modern approach in the teaching of the subject lays great emphasis on spatial interrelationships, relative location and regular concepts. These concepts according to him lay great emphasis on physical and human phenomena, with the overall goal of promoting international co-operation and peaceful co-existence of humanity.

The field of Geography enables us to appreciate how places and landscapes are formed, how people and environments interact and associated consequences, and the interconnection between cultures and societies. Teaching resources in Geography include both projected and non-projected media. The inadequate use of non-projected media has been cited as one of the causes of poor performance in Geography in the national examinations. However, despite the value non-projected media resources add to the understanding of Geography it has never been critically evaluated by many scholars as various studies and literature reveal. It is against this background that this study analyzed these media resources in terms of their availability, adequacy and constraints experienced in their acquisition and use in the teaching of Geography in public secondary schools in Koibatek district, Kenya.

Misoi (2010) investigated on poor performance in Geography in national exams, and affirms the need for establishment of the “Geography show room” where the relevant learning resources are kept for practical lessons. Poor methods of teaching Geography coupled with inadequate media resources contribute to the low status of Geography and forcing many students to opt for other subjects in the school curriculum. This quest of avoiding more difficult mathematical orientation of the subject reflected in such topics as physical Geography, map work, fieldwork and photograph interpretation although these are abstract concepts for the students, the main problem may not be attributed to this facts alone. The cause may be badly due to poor teaching where the teachers to not use adequate and relevant media resources to teach these concepts. Misoi (2010) argument is that effective teaching of these concepts can only be improved when the concept of Geography room is wholly embraced by secondary schools.
2.0 LITERATURE REVIEW

Geography as a field of study helps pupils and students to make sense of their environment and it develops in them an understanding about why places differ (Lang’at, 2016). It is also concerned with complex factors that bind places together. It further enables learners to understand spatial regularities that can be identified and the importance of such reputations. In addition, the knowledge of Geography helps young people to understand their environment and how it can be gainfully used or misused.

The discipline of Geography is broadly categorized into physical and human Geography. Physical Geography concerns itself with physical features on the earth surface. Human Geography majorly deals with human activities and their impacts on the environment. It is for these reasons that Geography is said to have a special place in human life. This arises from the fact that it makes people aware of earth-space, and arrangement and interaction of objects and forces that occupy that earth space.

Lang’at (2016), in his attempt to explain the absence and poor use of media resources in schools, emphasizes that at the heart of this problem is the reluctance of the teachers to use media resources, irrespective of their quality of availability. He asserts that the teacher’s perception of these materials is not related to the curriculum and that their use has not really penetrated the education sector to the point that they view them as necessary in teaching. He concludes by advising that teachers and especially Geography teachers should utilize media resources widely and effectively in instruction. In addition, that they must be adequately trained in media education and pedagogy.

Non-projected media resources are teaching aids that facilitate the presentation of message that does not involve the projection on the screen. The examples of these teaching aids include chalkboards, maps, graph papers, charts, specimens, Geography rooms, weather stations, models, museums, fieldwork and still pictures, among others. These teaching aids are very important and necessary in the teaching of Geography.

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3.0 RESULTS

Constraints in Use of Non-projected Media Resources in the Teaching of Geography
The fourth objective of the study sought to find out the constraints faced in use and acquisition of non-projected media resources in the teaching of Geography in public secondary schools in Koibatek District. The views of the Geography teachers were necessary because of their crucial role as chief subject instructors. The study used Likert type questions to gauge the level of seriousness of the various constraints faced by Geography teachers in the course of teaching Geography with the use of non-projected media resources. Aspects of constraints in the use of non-projected media resources that were investigated related to non-availability of non-projected media resources, work load, nature of curriculum, cooperation from the school administration and teaching colleagues. When asked to state whether the constraints they faced while using selected non-projected media resources were very serious, serious, not serious and do not know, they respondents as follows.

**Unavailability of Non-projected Media Resources**

While responding of what they thought of unavailability of some non-projected media resources, 32 percent of Geography teachers felt this was a very serious constraint in the teaching of Geography. A similar proportion-32 per cent- of Geography teachers also considered unavailability of some non-projected media resources a serious constraint. Geography teachers who felt that this was not a serious constraint in the teaching of Geography were 29 per cent.

![Figure 1: Constraints Caused by Unavailability of Media Resources](image)

From the above findings, it is discernible that up to 64 per cent of Geography teachers felt that unavailability of non-projected media resources is a serious constraint ineffective teaching of Geography. What is not clear is how they coped with these constraints to record impressive performances in national. Put in the context resource
constraints generally, these findings appear to concur with the findings of KNEC (2007) which revealed that none of the schools surveyed had all media resources in sufficient quantities. The only point of departure between the two studies is that while KNEC (2007) study blamed the inadequacy of these resources on high student enrolments, the current study has noted that enrolments in Geography especially at form three and four levels has been on the decline. However, the problem of inadequate teaching resources is not new in Kenya, as studies done several years back had already vindicate the same (Lang’at 2016).

The current study vindicates Government’s own study on teaching resources done at the beginning of this decade in Koibatek district. The study found out that the district lacked sufficient media resources like text books, reference books and teaching aids for teaching science subjects and also Geography (MOEST, 2002). The report noted further that poor performance in the subjects cited was largely to blame on the inadequacy of the aforementioned teaching resources. Curiously, even with this awareness not much has been done to bolster the availability and adequacy of these resources in public secondary schools in the area nearly ten years down the line.

Heavy Teaching Work Load
Although work load has been variously mentioned as a common problem in institutions of learning, the extent to which it is a problem was revealed in this study. Over 70 per cent of Geography teachers interviewed said that a heavy workload was either very serious or serious constraint in the effective teaching of Geography in public secondary schools in Koibatek district. Specifically, the findings are that 22 per cent of Geography teachers suggested that teaching workload was a very serious constraint while 50 per cent of the Geography teachers stated that it was a serious constraint in the teaching of Geography. Figure 2 summarizes teachers’ responses on work load.
On further analysis, the study established that indeed most of the Geography teachers handled many students in different forms and streams. Nearly half of the teachers in the district had 4 classes to handle in any given term. A third of them taught an average of 2 classes. As the following graphs shows, most of the teachers were overloaded a situation that could have a bearing on their work effectiveness.
The implication here is that teachers in schools with two streamed classes had up to 8 classes to teach and an average of 24 lessons to handle in a week. This is quite high considering that Geography teachers like other high school teachers were required to have another teaching subject in any given time. The workloads are expected to be higher in provincial schools where three streamed classes are common. Figure 4 gives the illustration.

Figure 3: Geography Teachers Work Load

Figure 4: Number of Lessons handled by Geo Teachers in a Week
The use of media resources in teaching Geography makes teaching of the subject more effective and learners-friendly (Ndirangu, 2000). Nevertheless, the envisioned effectiveness of media resources in the teaching of Geography may not be achieved given teachers shortage currently experienced in secondary schools countrywide. Although the Ministry of Education (2000) ordered the Teachers Service Commission to accord teachers minimum load that enables them to effectively discharge their duties while giving them room to attend to teaching requirements outside the class setting, this has come to pass because of chronic shortage of teaching staff in public schools.

Unsupportive school Administration
This study revealed that 71 per cent of the teachers pointed out that the administration did not support them in the teaching of Geography. In this context, the support of school administration on teaching of Geography is based on the few available resources.

![Figure 5: Constraints Caused by Unsupportive Administration](image)

Although just a mere 22 per cent of Geography teachers indicated that lack of support from the administration was a serious constraints in the use of non-projected media resources in teaching Geography, it is obvious here that up to 93 per cent of the teachers felt that the administration was not supportive. The study went further to find out the kind of support Geography teachers would want granted but was not then forthcoming. Teachers pointed out lack of consultation when procuring non-projected media resources as the main form of lack of support from their administration. Some noted that administration sometimes preferred availing school transport to extra curricula activities to field work in Geography. Others pointed out delay in availing essential resources.
teaching materials thus delaying or at times forcing them to discard some lessons that required the use of specific non-projected media resources. Some teachers also felt that the subject is not given attention similar to the ones given to sciences and languages. Statistically, teachers' responses may be summarised as 27 per cent, 14 per cent, 41 per cent and 18 per cent representing lack of consultation, lack of transport, delay in availing essential items and subject prejudice respectively. These statistics are presented in Figure 6.

Although limited funding in public secondary schools in the country has undermined provision of essential teaching resources as noted by Jeruto (2018) the problem is exacerbated by reluctance of the administration to consult the instructors to ensure that the limited funds were spent on the most critical resources. Disregarding teachers' inputs while procuring and purchasing non-projected media resources is not only detrimental to effective implementation of the Geography syllabus but also has the potential to demotivate the instructors. Writing over two decades ago, Kassu (2019) noted the link between motivation and creativity. He observed that motivated teachers can innovatively develop their own non-projected media resources needed in the teaching of their respective subjects.

On Crowded Curriculum
It is the Koech Commission in the year 2000 that reported that high school curriculum was overcrowded and required serious review. His commission further observed that left as it were then the curriculum would be a major impediment in its effective implementation. But the commission did not specific issues that required review. When asked to describe whether overcrowded curriculum was very serious, serious or not serious constraint in the effective deployment of non-projected media resources in the teaching of Geography, 76 per cent of Geography teachers indicated that it was either a very serious or a serious constraint as Figure 7 illustrates.

The current study established from Geography teachers the nature of overcrowding and specific issues that in their opinion required review. Some teachers felt that the Geography curriculum was too extensive and theoretical and as such does not make it an interactive subject. They were also of the view that some of the areas put forward for coverage were either not necessary or too advanced for secondary education. Those that they considered unnecessary, they advised would be better handled in other subjects such as agriculture. This observation appears to support that of Osakwe (1994), who had earlier argued that it is very difficult to draw a line between Geography and hydrology, geology, politics and agriculture.
Given that many Geography schoolteachers were of the opinion that Geography curriculum was over loaded, what then should guide the design of the curriculum? 1-luckle (1981) stated that Geography should help students derive, clarify and apply values in such a way as to counter confusion, guide choice and contribute to the solution of problems, which threaten our very corporate survival. He added that realistic school Geography should not only offer a range of explanations of such an unjust world but should also provide learners with some prospect of its reform. These thoughts in the opinion of the current study are essential in guiding policy changes in curriculum development, implementation as well as in the examination of Geography. From these findings, it is possible to conclude that Geography either receives lip service or gets a very peripheral or casual mentioning in secondary school education.

On Examination Oriented Curriculum
The findings of the study showed that 62.1 per cent of Geography teachers pointed out that the above item is not a serious problem in the teaching of Geography. This means that the curriculum is not focused on examination, but on the lifelong skills, which are actually in line with the national goals of education (to develop a complete personality).
The Geography teacher is involved in finding immediate solution in the classroom to curriculum problem associated with teachings of the subject in schools. Kanjiru (2014) has pointed out that the nature of the curriculum problem the teacher has to solve is dependent to a large extent on the kind of educational system in which the individual is employed. Giving the example of Nigeria, he regrets that teachers are supplied with prescriptive syllabuses in which its aims are expressed in terms of external examination requirements. An examination of the previous Kenya National Examinations regulations of 2007 reveals a greater emphasis on practical in Geography subject. However, the examination of the subject does not have practical component. The examination in both papers exclusively has questions on theory. This then begs the question why emphasize on areas that are not then examined, in a largely examination oriented syllabus. Teachers and students alike may not put much effort in Geography practical-areas where non-projected media resources are most used- since it does not contribute to the overall grading of the subject. Nevertheless, it is Awino (2011), who ably argued that science teachers in Kenyan secondary emphasize on rote learning and drilling of learners on past papers to improve their chances of doing well in national examinations. This further points to the fact that secondary school curriculum is tailored made for examination, and this indirectly promotes theoretical at the expense of practical learning in secondary school education. The spiraling effect of this is evident in the lethargic manner in which school heads handle non-examinable practical learning in their respective institutions. However, even as teachers concentrated on examinations, (Unwin & McAleese 2011) had earlier warned that inadequate learning
resources (including non-projected ones), and inadequate exposure of the same (where they were available) had contributed to poor performance in national examinations. It is thus important that all concerned parties in the implementation of Geography syllabus change towards acquisition and use of non-projected media resources in teaching, not only of Geography but of other subjects that require them as well.

**Overcrowded Classes**

The findings of the study show that 25 per cent of Geography teachers considered overcrowded classes as a very serious constraint, while 25 per cent were of them view that the item is a serious constraint. The issue of overcrowded classes is a great challenge in the teaching of the subject because large class size cannot allow the use of teaching aids since there may be no space for display of the teaching materials. Figure 10 provides a clear presentation of Geography teachers’ opinions toward overcrowded classes.

![Figure 10: Constraints Occasioned by Overcrowded Classes](image)

Public secondary schools the study surveyed had about 70 Geography teachers against student population of 4300. This means that each Geography teacher had up to about 60 students to handle. This is nearly one and a half times the recommended ratio of one teacher to forty students. The situation was, however, worse in individual institutions. Public secondary schools that had less than 30 students per class were just 10 per cent. Other results were 30-40 students, 41-50 students and over 50 students representing 18 per cent, 24 per cent and 48 per cent of public secondary schools in that order.
Overcrowded classes has been noted a major hindrance to effective learning. Frustrations and sense of failure in teachers is brought about by large class size and increased academic needs of students working without resources and poor administrative practices. What then happens when teachers are confronted with large classes? According to some scholars, in the face of large classes, teachers would spend large part of teaching time on class management. They argued further that very large size of classes make teachers find it difficult to use learning practices that work best with small groups. The current study also holds that the attention teachers are required to have with individual students diminishes as the class size becomes larger. This obviously constrains the use of non-projected media resources in teaching generally.

4.0 CONCLUSION AND RECOMMENDATIONS

Recommendation: Schools in the district were constrained by crowded classes, crowded curriculum and heavy teaching workload, unsupportive school administrators and examination - centered curriculum that inspires very little in acquisition of knowledge that is directly not used in the examination.

Conclusion: Geography subject was still the most popular subject among the humanities if enrolments for national examinations between 2005 and 2009 were anything to go by. However, at the same time, there were several complaints that Geography syllabus was extensive and over ambitious and in some cases had topics that would be better handled in other subjects. This implies that issues of syllabus required urgent attention to make
it reasonable and relevant. Indeed the study concludes here that the current syllabus makes its implementation expensive in terms of both skill requirements and financial resources; which unfortunately was in short supply in most schools.

REFERENCES