Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.13, No.18, 2022


# Determinants of Use of Audio Visual Aids in Teaching Geography to Secondary School Students In Madiany Division

PATRICK ABUYA OMUNGO

Post graduate diploma in Education Project, Maseno University, P.o.Box 1488-40100, Kisumu

patrickomungo@gmail.com

**ABSTRACT**

The aim of this research project was to establish determinants of use of audio visual aids in teaching geography to secondary school students in Madiany Division of Rarieda district, Kenya. The study set out to achieve three objectives which were to determine attitude of secondary teachers towards the use of audio visual aids in teaching geography, to ascertain what audio visual aids are available and to establish how frequently audio visual aids are used. From a literature review on use of audio visual aids a theory suggested by discovery education (2008a) is adopted supported by a conceptual framework derived from the work of Ernest Hilgard (1956).In scope,the literature review includes audio visual aids, attitudes towards audio visual aids, availability and frequency of use of audio visual aids. A purposive sample is chosen from the population of all secondary school teachers in Madiany division of Bondo district and responses elicited through interviews conducted with at least all geography teachers(n=33). Analytic tools applied are frequency distribution and cross tabulation. Results reveal that attitude towards audio visual aids determines use of the aids. Teachers have a favorable attitude for wall charts (100%) Television (90.9%) internet (84.8%) and for this reason are most likely to use these aids. Wall charts (97.0%) posters (72.7%) and television (69.7%) is the most widely available aids. The least available aids are magnetic boards (78.8%) projectors (75.8%) and projected aids (63.6%). Frequency with which teachers use audio visual aids varies with availability and competence in using the aids. The most frequently used aids are Wall charts (51.5%) of all lessons handouts (45.5%) flipcharts and posters (42.4%) of all geography lessons. Audio visual aids should no longer be considered as new technologies because they are known and if they are to remain instructional material teachers have to practice with them.

**Key words**: Audio visual aids, availability, Frequency of use, attitude.

**DOI:** 10.7176/JEP/13-18-17
**Publication date:**June 30th 2022

## 1.0 INTRODUCTION

Audio visual aids are tools or items trainers, teachers or communicators use to enable their audience appreciate with their sense of hearing and/ or sight any subject matter. They assist man to materialize their thoughts in the form of graphic images which in many cases forms a concrete frame of reference. Audio visual aids are widely used in general education mainly due to the reason that students need something they can see.

The works of Odera (2002) suggests that a lot of literature is available on use of audio visual aids in primary schools, secondary schools and universities. Notably earlier studies by Botham (1967:1) stress the need to use audio visual aids in teaching to make learning interesting and improve understanding. No one concerned with the communication of principles and ideas and with teaching and training in any form can afford to neglect the use of audio visual aids.

We all learn differently and if a teacher were to use one method only, this may hinder learning for some of the students. Therefore appropriate audio visual aids and a variety of methods must be identified. These are the tools that facilitate the communication of principles and ideas to the audience.

A review of research findings by Getis and Jain (2003) reveals that audio-visual aids can reduce abstraction in temporal concepts and better display changes over time. Audio visual aids free up cognitive resources, thereby reducing the demands on short term memory and raising the success rate of accurate encoding (Rieber, 1996).

Mayer and Gallini (Cited by Getis and Jain 2003) established that the concurrent presentation of verbal and visual information allows students to build connections between the two concepts.

In geography the acquisition of spatial knowledge is a highly visual process which can be easily reinforced by audio visual aids which deliver visual representations of both physical and cultural environment. According to the two researchers, ability to display animated graphics through the internet makes it a stimulating instructional tool for explaining complex phenomena in physical geography.

For instance fundamental concepts such as Coriolis effect and Hadley circulation need to be learned before a student can be expected to understand global atmospheric circulation. Although spatial temporal in nature, these fundamental concepts have traditionally been taught using static images such as those found in introductory physical geography text books. Be that as it may audio-visual aids can be used to display animated graphics, allowing students to view moving simulations of these concepts (Getis and Jain 2003). Even though these researchers established that the use of audio-visual aids in geographic instruction has a positive effect on the performance of learners, there is lack of such novel applications of the technology in developing countries such as Kenya. As such there is need to explore the possibilities of using audio-visual aids in enhancing comprehension of abstract concepts in Geography in Madiany division.

Maguire (1989) documented examples of various human geography topics which could be taught using audio-visual aids. These topics in human geography include; site selection process for a new factory, urban land use and a modeling environment for future relationships on a global scale between population agriculture, resource use, industry and pollution. Just as in physical geography, this also appeared to have a positive effect in informing abstract concepts in the topics in question.

According to (Odera ,2002) even though there is evidence of use of audio-visual aids in geography education in developed economies, there is little or no corresponding evidence on the same in the developing countries. Inconsistencies abound in the use of audio-visual aids in geography education in Kenya that consequently impact negatively on the performance of learners in the subject. There are also cognitively difficult topics, concepts or misconceptions in learners which may be illuminated by use of appropriate audio-visual aids.

Currently teachers of geography in Kenya predominantly use educational resources that incorporate only two dimensions (2D), such as chalkboard illustrations, wall maps charts and posters. These are not able to help learners grasp certain abstract aspects of geography, especially those that require spatial motion and changes in time, place and location. Geography as a unit of discourse is by its very nature utilitarian, encompassing several spatio-temporal dynamics. As such, the predominant use of 2-D materials in teaching the subject may not have a positive and long lasting impact hence diminishing interest and performance in the subject and creating a demand for use of audio visual aids.

As observed by Duffy and Cunningham (1996) there is currently limited inclusion of real-world learning experiences in the traditional classroom setting. Mostly the content presented in the classroom is disconnected from its real -world context often adversely affecting learner motivation in particular. Therefore this study sought to address the mismatch identified herein that even though audio visual aids have been attested to have a positive impact on learner's performance, not many educators use them in teaching and learning innovatively. One notable previous attempt at eliciting answers to this troubling question was by Abuli (2002) who from a study at Lusengeli Secondary school established that teachers tend to use audio visual aids less frequently due to the considerable time required for planning and preparing lessons in which the aids are to be used.

## 1.1 STATEMENT OF THE PROBLEM

In Madiany division the blackboard still remains the standard piece of visual equipment available in each secondary school class and laboratory yet it has so many drawbacks. The grating noise of a piece of chalk improperly rubbed against the board is enough to detract attention of both the teachers and student. Very frequently reflection through the windows of a classroom cause a glare that mars and reduces visibility of the audience. Frequent erasing also distracts teachers from the continuity of the presentation. At all times the writing or drawing must be completely legible and large enough so that all the audience may read and see which is not the case. All these characteristics of the blackboard state an inherent problem encountered by teachers who have no other option.

Both projected Aids and Non projected Aids are required in these schools. Posters, teaching charts, handouts and models are useful tools that are readily accessible by teachers."Projected aids such as films, slides and photographs are excellent tools during teaching sessions and add to or generate great interest. However both these projected aids and non-projected aids are not adequately used in the teaching learning process leaving us with the question weather school administration encourages use of these aids by buying these aids or is indifferent to the teaching aid needs of the teacher. In institutions which encourage use of such aids and allocate resources for their acquisition both projected and non-projected aids like the overhead and Liquid Crystal Display (LCD) projectors can be used in teaching with great effect. However this has only been witnessed in schools in urban area and is lacking in schools in Madiany division where most public schools depending on resources allocated by the government.

Where then is the problem of low use of audio visual aids. Is the problem of low use of audio visual aids with the teachers or the aids? The International Council for Education Media (1987) suggests that one of the main obstacles to general use of any audio visual aid has without doubt been the resistance of teachers who have shown little inclination to use a range of techniques borrowed from the world of entertainment. Only recently have secondary schools considered audio visual aids for example radio and television to be positive elements, in contrast to the last decade when pupils were taught to keep a critical distance from these aids, the negative aspects of which are highlighted. Pupils are interested in a technology which is part and parcel of their world. Further, the conscious or unconscious stance taken by teachers is therefore a difficulty to school administrators in Madiany division. The administrator must remain totally objective and be able to explain in detail the objectives, activities and modes of utilization of any or all audio visual aids. The teacher alone chooses the means which is best adapted to his subject his audience and circumstances. The difficulty of clarifying objectives is great and certainly prejudicial to optimum use of audio-visual aids. The problem here is both pedagogical and budgetary.

Despite our awareness of the need to use audio visual aides in teaching and their demonstrated effectiveness, it is not clear how often they are used in our secondary schools and what determines use of these audio visual aids by geography teachers. Little or no work at all has been done and published by any researcher in this area in Kenya. This proposed study is therefore a humble attempt to investigate the determinants of use of audio visual aids in teaching geography to secondary school students of Madiany division in Kenya and more specifically to answer the research questions and objectives listed below.

### 1.2 OBJECTIVES OF THE STUDY

1. To determine attitude of secondary school teachers towards the use of audio visual aids in teaching geography.
2. Determine what audio visual aids are available in the secondary schools.
3. Determine how frequently audio visual aids are used by teachers in teaching geography to secondary schools.

### 1.3 RESEARCH QUESTIONS

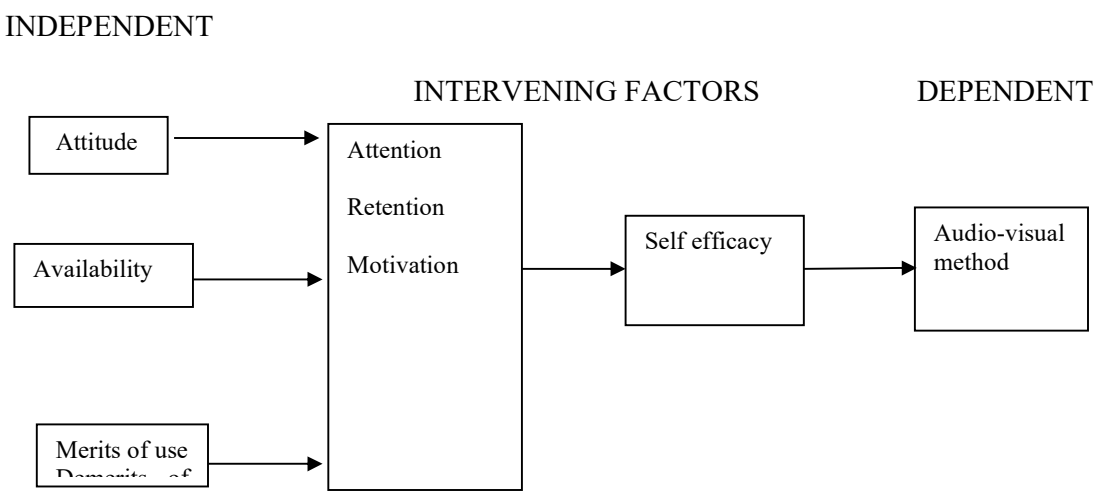
1. What is the attitude of secondary school teachers towards the use of audio visual aids in teaching?
2. What audio visual aids are available in the secondary schools?
3. How frequently are audio-visual aids used by teachers in the secondary schools?

### 1.4 THEORETICAL FRAMEWORK

According to discovery education (2008a) in the 21st century educators rely on and learners expect multimedia instruction. Educational media are being increasingly used as part of classroom experience due to their popularity and effectiveness. Educators have a variety of educational media formats to choose from including VHS videos, DVDs, CD-ROMS, Streaming video from the Web, Television and radio as well as emerging technologies that have yet to enter the technological space. These various types of media may be integrated into classroom instruction and used for assistance and support. Discovery Education (2008a) states that incorporation of educational media into the curriculum has become a defacto requirement and a vital element of ensuring all learners success. An attempt to elicit a clear connection between use of audio-visual aids and existing learning goals is illustrated in the conceptual framework below.

### 1.5 CONCEPTUAL FRAMEWORK




Source: Adopted from Earnest Hilgard (1956) Theories of Learning.

In Tandem with the conceptual framework above several principles of learning are derived from Earnest Hilgard's (1956) work and are summarized below. These are principles which teachers have adopted with success and should be replicated in this setting because even though society is becoming more dependent on technologies the ultimate objective of instilling knowledge to the student should be upheld. Technologies are not used to transmit the constructed knowledge but to support knowledge formation of the individual. Hilgard proposes that in the classroom setting teachers should

1.Select meaningful materials and meaningful tasks which are learned and understood more readily.

2.Use an Audio and Visual Aid to reinforce the message and avoid motivation that is too intense (especially pain, fear anxiety).

3.Make sure that the audience is able to see and hear clearly which motivates a learner and makes the learner attentive

4.Practice using an Audio and Visual Aid beforehand and be accustomed with the equipment.

The conceptual framework describes the efforts of the teacher to prepare teaching learning scenarios and practice sessions for a motivated class who strive for and are highly aware, who retain what they have learnt easily and who are capable of integrating and relating it to developments in other fields or areas of knowledge in the course of their study.

### 1.6 SIGNIFICANCE OF THE STUDY

This study attempts to reveal the determinants of use of audio visual aids in teaching geography to secondary school students in Madiany Division.In doing so, it is hoped that the findings would be of value both to planning and to practice. With regard to planning the findings of the study provide an insight on the cost effectiveness of using audio visual aids as a medium for teaching and learning geography as opposed to traditional chalk talk and the blackboard. Second the study will provide information on the identity and determinants of use of audio-visual aids as far as teaching of geography is concerned. On the practical side, the study also attempts to contribute a deeper understanding of the teachers attitude towards audio visual aids and what determines how prepared they are in the guidance of the pupils to learn geography through audio visual aids.

### 1.7 DEFINITION OF TERMS

AUDIO VISUAL AIDS: Tools which "Make use of the two main channels of learning: sound and vision."

NON PROJECTED AIDS: Are static tools used to make representations to enhance understanding of the subject matter for example posters, handouts models and flipcharts.

PROJECTED AIDS: Refers to communication facilitation tools like Sound film projectors, Film strip projectors, Slides projectors, radio, television and internet.

ATTITUDE: Attitude is an orientation towards or away from some object, concept or situation and readiness to respond in a predetermined manner to related objects, concepts or situations.

AVAILABILITY: Capable of being turned to account; hence at ones disposal, within ones reach.

FREQUENCY: Rate of recurrence.

**1.8 LIMITATIONS**

There are 20 secondary schools in Madiany division. The time factor and distances involved if one were to interview teachers in all the schools would make the cost of the study prohibitive. Therefore, only geography teachers are interviewed in all the secondary schools in Madiany division. As a result of this limited sample size only reasonable generalizations can be made from this study.

**2.0 REVIEW OF LITERATURE:**

According to Ngatia (1981:545) "Attitudes play a great role in an individual's tendency towards or away from an object, concept. If a teacher had a negative attitude towards audio-visual aid, this would be evidenced by their tendency to move away from the aid that is to avoid using it. If on the other hand a teacher had a positive attitude towards the use of audio-visual aids this would be made evident by their tendency to use them when one has the choice to do so. The ideas implied here and by Laycock and Munro (1966) are that acceptance and rejection are evident in each definition of attitude. Therefore a noble step, therefore, would be to change teacher's attitudes towards the aids if attitude is negative, and then avail these aids to teachers when attitudes are positive. This strategy has in different scenarios succeeded in breaking the attachment to the chalk and talk method and accommodating different learning styles of students.

Mialaret (1967) observed that since 1953, UNESCO has been promoting the study, use and production of educational aids in its member states. A simple enumeration of the international meetings devoted to audio-visual aids in education indicates how constant this effort has been. Messina (1953), New Delhi (1958), Mexico (1959) Tokyo (1960) Kuala-Lumpur (1961) Moshi (1961) and the meetings of experts on "New methods and "techniques in education "Paris March 1962.These conferences were necessitated by increases in population in most countries of the world and have resulted to enormous pressure on our educational system. A teacher who earlier handled a group of ten students in class has to deal with fifty or more and yet the quality of training is expected to remain the same despite this increase in the number of students. Khachina (1972) echoed similar sentiments insisting that we have to teach others well enough to carry out certain tasks and do so effectively with the aid of any device that can make the learning experience more concrete and effective more realistic and dynamic. Jain (2004) describes audio visual aids as appealing to the mind through visual auditory senses. They concretize the knowledge to be presented and help in making the learning experience apple real, living and vital.

Availability of audio-visual-aids is discussed in great detail by Abreu (1982) and Kangethe (2006). The authors highlight the need for teachers to obtain audio visual material or equipment for use with their students and also give reasons for use/non-use. One reason emerging in these reports is lack of trained personnel. In most cases the maintenance and service of equipment is done outside the school because very few schools have trained staff. There should therefore be a more intense exchange between ministries and organizations for the optimum use of audio-visual aid. "This suggests that in our schools, it is desirable to have at least one person trained on audio visual aids as described by the Chinese that if we hear we forget, if we see we remember and if we do something we know it.

Audio visual aids are a powerful tool when available to teachers and used properly and frequently. Learning outcomes may change positively because many students communicate learn and play using audio and visual equipment. It is therefore an important part of their lives. This phenomenon is destined to increase with audio visual aids serving as didactic resources, an observation supported by Oyarzo (2010) who established evidence suggesting that students who submitted their homework printed participated (90%) more in submitting homework via email.

Misuse of these aids may mean a frustrated audience from time to time. This may lead to a feeling of inadequacy by the user of the aid and eventually a negative attitude towards the aid may be formed. Correct use may lead to a happy audience all the time and a feeling of satisfaction by the user hence a positive attitude towards the aid. Such a teacher will be motivated to use the aids frequently and feel encouraged to explore other ways of applying them. House (1981) established that we can go much further in the use of audio visual aids in education here in Kenya, if we can at least increase the awareness of audio visual aids in all areas in secondary schools.

## 3.0METHODOLOGY

### 3.1 RESEARCH DESIGN

A cross sectional research design is proposed for this study. The cross sectional design is selected because a cross sectional survey collects data to make inference about a population of interest at one point in time over a short period. By using cross sectional design in the study, it will be possible to measure differences between or from among a variety of people, subjects of phenomena rather than change. Cross sectional design adopted also provides a snapshot of the outcome and characteristics associated with it at a specific point in time. Since the cross sectional design use survey techniques to gather data they are relatively inexpensive and take up little time to conduct.

### 3.2 AREA OF STUDY

The area of study is Madiany division. Madiany is located at Latitude -0.2833° and Longitude 34.3167° within Rarieda sub county. Rarieda subcounty is one of the 12 sub counties that make up Nyanza province in the south west part of Kenya. The total area of the sub county is approximately 399.6km Square. According to the Rarieda district development plan (2009) the sub county (formerly district) lies between latitude 0, 26’ to 0, 90’ north and longitude 34, 10’ east and 34, 35’West (RDDP 2009). In the 2009 Kenya Population and housing census a total of 21346 persons comprising of 11984female and 9358 male, (KNBS 2009) were enumerated in Madiany division. Majority of the population belong to the Luo tribe who earn their living through subsistence farming and fishing. The study population is all secondary school geography teachers in Madiany division Rarieda District. The sample consists of 33 geography teachers in 20 secondary schools.

**TABLE 1. SAMPLE**

| SCHOOL | Number of Geography Teachers | Sample |
|---|---|---|
| 1. Achieng Oneko Secondary school | 1 | 1 |
| 2. Agok Secondary School | 1 | 1 |
| 3. Chianda High School | 5 | 5 |
| 4. Gagra Secondary School | 2 | 2 |
| 5. Kawuondi Secondary School | 1 | 1 |
| 6. Lieta Secondary School | 2 | 2 |
| 7. Mak Asembo Secondary School | 2 | 2 |
| 8. Masala Secondary School | 1 | 1 |
| 9. Mirando Ongalo Secondary | 1 | 1 |
| 10. Naya Secondary School | 1 | 1 |
| 11. Ndigwa High School | 3 | 3 |
| 12. Nyabera Secondary school | 1 | 1 |
| 13. Nyakongo Secondary School | 2 | 2 |

| | | |
|---|---|---|
| 14. Nyamasore Secondary School | 1 | 1 |
| 15. Ochienga Secondary School | 1 | 1 |
| 16. Okela Secondary school | 1 | 1 |
| 17. Rachar Secondary School | 2 | 2 |
| 18. St Sylvesters Madiany Girls | 1 | 1 |
| 19. Tanga Secondary School | 1 | 1 |
| 20. Wayaga Secondary School | 1 | 1 |
| N | 33 | 33 |

### 3.3 INSTRUMENTATION

Instruments of data collection are a questionnaire which is used to elicit responses from teachers on their use of audio visual aids in teaching geography. To achieve reliable data a minimum of two weeks is allowed to elapse between the pilot and the actual measurement. One of the experts to whom the instrument will be presented to establish face validity is the study supervisor. The data collection instrument was scrutinized and critiqued by the supervisor.

### 3.4 DATA COLLECTION PROCEDURES

Personal interviews were conducted with all geography teachers during the month of March 2013. The interviewer followed a rigid procedure laid down asking questions in a form and order prescribed. Observation method is also applied to supplement recording of verbal answers to various questions. This method was successful because interviewers are carefully selected, trained and briefed from a list of persons who exhibited the desired qualities; honest, sincere, hardworking, and impartial and possesed the technical competence and practical experience. Field checks were made to ensure that interviewers are neither cheating nor deviating from instructions given to them.

### 3.5 DATA ANALYSIS

Data is entered in a Microsoft Excel data entry screen. Data analysis is performed in IBM SPSS for Windows version 21. Analysis involves generating frequency distributions, and exploring correlations between the dependent variable (Use of Audio visual aids), intervening variables and each of the independent variables and representing results in the form of tables, pie charts, and bar graphs.

## CHAPTER 4: RESULTS AND DISCUSSION

### 1.1 DESCRIPTION OF THE STUDY POPULATION

In the preliminary analysis we examine five variables that will help reveal characteristics of the study population as pertaining to use of audio visual aids in Madiany division. Results tabled in table 4.1 identifies 10 audio visual aids with the four aids most mentioned by teachers being tape recorders (16.3%) and virtual classes(15.0%) followed by data show (13.8%) and books(12.5%) The responses establish that tape recorders are the most popular audio visual aid amongst teachers in Madiany division. However being an open ended question the responses will need to be confirmed with results from responses elicited from a list of audio visual aids presented to teachers of geography.

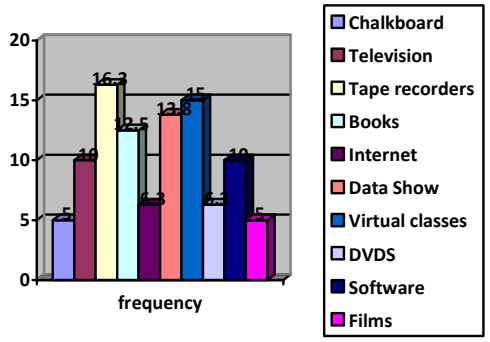
It is unanimously agreed amongst teachers that audio visual aids motivate students to learn more with (72.7%) strongly agreeing with this statement.(69.7%) also strongly agree that audio visual aids improve student attention while (72.7%) strongly agree that audio visual aids improve student retention. Another 78.8% strongly agree that audio visual aids when used are interesting to the students. Attitude of teachers towards audio visual aids is summarized in the chart below with teachers reporting a positive attitude towards all the four statements read to them and a higher percentage claiming they strongly agree with the statements.

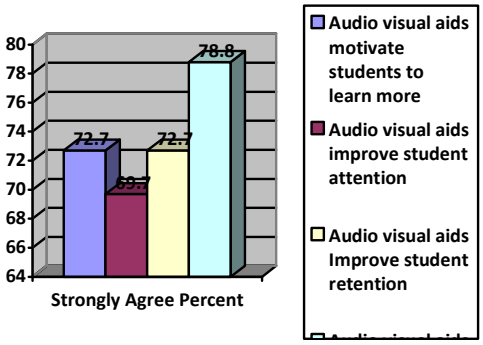
 

Why then are audio visual aids important in the teaching learning process, The most cited response to this question is a score of (34.4%) to the idea that audio visual aids motivates students and improves attention. Audio visual aids are also considered by (27.8%) as a tool for enhancing retention and memory while (24.6%) consider these are tools which enable a student understand content being delivered by the teacher with ease. Finally teachers believe that audio visual aids enable quick completion of syllabus. In class the choice of what audio visual aid is determined by a host of self reported factors coded into seven most mentioned by teachers.These are listed in table 4.1 below but the three most mentioned are Availability(26.8%) Topic(26.8%) and the cost of acquisition(16.9%).On the frequency of use of these teaching aids (57.6%)Teachers are of the opinion that audio visual aids should be used once a week

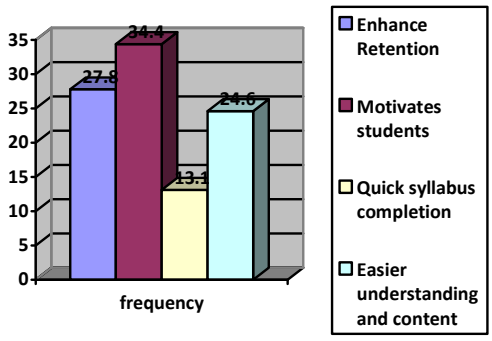
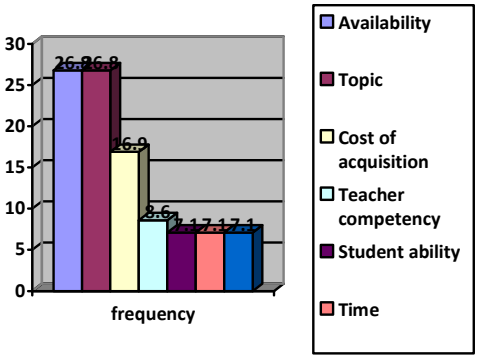
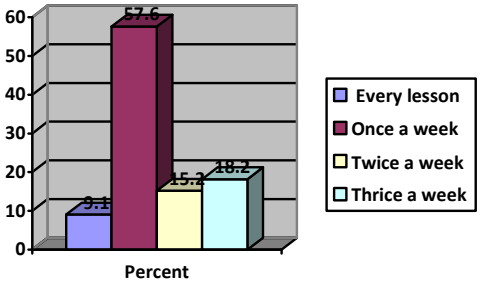
Table 4.1 Audio Visual Aids mentioned by Geography Teachers

| | Score | Percent | |
|---|---|---|---|
| 1. Audio visual aids mentioned by geography teachers? | | | |
| Chalkboard | 4 | 5.0 | |
| Tape recorders | 13 | 16.3 | |
| Books | 10 | 12.5 | |
| Internet | 5 | 6.3 | |
| Data Show | 11 | 13.8 | |
| Virtual classes | 12 | 15.0 | |
| Software | 8 | 10.0 | |
| Television | 8 | 10.0 | |
| DVDs | 5 | 6.3 | |
| Films | 4 | 5.0 | |
| | N=80 | 100 | |
| 2.Attitude towards audio visual aids | | | |
| *Audio visual aids motivate students to learn more* | | | |
| Strongly agree | 24 | 72.7 | |
| Agree | 9 | 27.3 | |
| *Audio visual aids improve student attention* | 23 | 69.7 | |
| Strongly Agree | 10 | 30.3 | |
| Agree | | | |
| *Audio visual aids improve student retention* | 24 | 72.7 | |
| Strongly agree | 9 | 24.2 | |
| Agree | | | |
| *Audio visual aids when used are interesting to the students* | 26 | 78.8 | |
| Strongly agree | 7 | 21.2 | |
| Agree | | | |
| *Teachers are motivated by administration to learn more* | 15 | 45.5 | |
| Strongly agree | 15 | 45.5 | |
| Agree | 3 | 9.1 | |
| Disagree | N=33 | 100 | |



| | | | |
|---|---|---|---|
| Why are audio visual aids important in the teaching learning process? | | |   |
| Enhance retention and Memory | 17 | 27.8 | |
| Motivates students and improves attention | 21 | 34.4 | |
| Quick syllabus completion | 8 | 13.1 | |
| Easier understanding and content delivery | 15 | 24.6 | |
| | N=61 | 100 | |
| What determines choice of audio visual aid? | | |   |
| Availability | 19 | 26.8 | |
| Topic | 19 | 26.8 | |
| Cost of acquisition | 12 | 16.9 | |
| Teacher Competency | 6 | 8.6 | |
| Student Ability | 5 | 7.1 | |
| Time | 5 | 7.1 | |
| Size of class | 5 | 7.1 | |
| | N=71 | 100 | |
| How often should audio visual aids be used? | | |   |
| Every lesson | 3 | 9.1 | |
| Once a week | 19 | 57.6 | |
| Twice a week | 5 | 15.2 | |
| Thrice a week | 6 | 18.2 | |
| | N=33 | N=100 | |

**4.2 Objective 1: To determine attitude of secondary school teachers towards use of audio visual aids in teaching geography.**

The first objective explored in this study was; to determine attitude of secondary school teachers towards the use of audio visual aids in teaching geography. In the questionnaire administered on geography teachers in madiany division, teachers were asked to "Kindly indicate by checking in the appropriate column your attitude to audio visual aids available in the school". The measure of attitude is categorized as either favorable or unfavorable. The results are summarized in table 4.1 and 4.2. Table 4.1 above presents the list of audio visual aids mentioned as used by teachers in Madiany division. While table 4.2 below gives the attitude of geography teachers towards these aids.

Table 4.2 Attitude of geography teachers to audio visual aids.

| Audio visual aid | Favorable Attitude | | Unfavorable Attitude | | Missing | |
|---|---|---|---|---|---|---|
| | Frequency | Percent | Frequency | Percent | Frequency | Percent |
| Flip charts | 27 | 81.8 | 3 | 9.1 | 3 | 9.1 |
| Handouts | 26 | 78.8 | 4 | 12.1 | 3 | 9.1 |
| Internet | 28 | 84.8 | 5 | 15.2 | 3 | 9.1 |
| Magnetic Boards | 20 | 60.6 | 10 | 30.3 | 3 | 9.1 |
| Models | 24 | 72.7 | 7 | 21.2 | 2 | 6.1 |
| Posters | 27 | 81.8 | 3 | 9.1 | 3 | 9.1 |
| Projected aids | 21 | 63.6 | 7 | 21.2 | 5 | 15.2 |
| Radio | 26 | 78.8 | 5 | 15.2 | 2 | 6.1 |
| Radio Cassettes | 22 | 66.7 | 9 | 27.3 | 2 | 6.1 |
| Slide Projectors | 23 | 69.7 | 6 | 18.2 | 3 | 9.4 |
| Tape recorders | 28 | 84.8 | 2 | 6.1 | 3 | 9.1 |
| Television | 30 | 90.9 | 3 | 9.10 | 0 | 0 |
| Wall charts | 33 | 100 | 0 | 0 | 0 | 0 |
| | N=33 | 100 | N=33 | 100 | | |

The results show that in Madiany division (100%) of teachers have favorable attitude for wall charts. Other audio visual aids favorable to teachers in Madiany Division are Television (90.9%) and Internet (84.8%). Teachers have favorable attitudes for internet because of the recently selected schools to serve as ICT centers where students can access internet services at no cost.

The three audio visual aids to which geography teachers have the highest favorable attitude are Wall charts (100%), television (90.9%) internet (84.8%) and tape recorders (84.8%).Similarly, the three audio visual aids to which geography teachers have the highest unfavorable attitude are Magnetic boards (30.3%), Radio cassettes (27.3%) Models and projected aids(21.2%)

Geography teachers report that their attitude is unfavorable because they have not been trained on using these aids (incompetent) and because the aids are expensive implying that the school cannot afford them in the short run. A case to note is Kawuondi Secondary school who entirely depends on the nearby Masala secondary school for audio and visual equipment like computers, radio and television.

**4.2 Objective 2: To establish audio visual aids available in secondary schools in Madiany division.**

The second objective of this study aims to establish the audio visual aids available in secondary schools in Madiany division. Consequently teachers were asked to identify if the availability of each of the audio visual aids was favorable or unfavorable. Where availability of an audio visual aid is classified as favorable, it implies that the audio visual aids are readily available to the geography teachers for teaching any of the classes. Where availability is classified as unfavorable the audio-visual aids are not readily available in the school and could only be used if hired from a different source. The results are shown in table 4.2 below.

Table 4.2: Availability of audio visual aids to geography teachers.

| Audio visual aid | Favorable Availability | | Unfavorable Availability | | Missing | |
|---|---|---|---|---|---|---|
| | Frequency | Percent | Frequency | Percent | Frequency | Percent |
| Flip charts | 22 | 66.7 | 7 | 21.2 | 4 | 12.1 |
| Handouts | 22 | 66.7 | 8 | 24.2 | 3 | 9.1 |
| Internet | 15 | 45.5 | 16 | 48.5 | 2 | 6.1 |
| Magnetic Boards | 4 | 12.1 | 26 | 78.8 | 3 | 9.1 |
| Models | 11 | 33.3 | 20 | 60.6 | 2 | 6.1 |
| Posters | 24 | 72.7 | 6 | 18.2 | 3 | 9.1 |
| Projected aids | 7 | 21.2 | 21 | 63.6 | 5 | 15.2 |
| Projectors | 4 | 12.1 | 25 | 75.8 | 4 | 12.1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Radio | 22 | 66.7 | 9 | 27.3 | 2 | 6.1 |
| Radio Cassettes | 20 | 60.6 | 11 | 33.3 | 2 | 6.1 |
| Tape recorders | 19 | 57.6 | 11 | 33.3 | 3 | 9.1 |
| Television | 23 | 69.7 | 10 | 30.3 | 0 | 0 |
| Wall charts | 32 | 97.0 | 1 | 3.0 | 0 | 0 |
| | N=33 | 100 | N=33 | 100 | | |

From table 4.2 above wall charts are the most readily available cited by (97%) of the respondents followed by posters (72.7%) and television (69.7%) of the respondents respectively. The least available audio visual aids are magnetic board cited by (78.8%) of geography teachers, projectors (75.8%) and projected aids (63.6%) of the teachers in Madiany division.

Geography teachers cannot use what is not available in the school. Consequently magnetic boards, projected aids and projectors are the three least used audio visual aids in Madiany division. These aids are used less frequently than the wall charts mainly because the schools have not purchased them. Its worth noting that it's only in Chianda High school where an overhead projector is readily available. However the projector has to be shared by twenty four classes.

**4.3 Objective 3: To determine how frequently audio visual aids are used by teachers.**

To establish the frequency in which audio visual aids are used, teachers in Madiany division were interviewed and responses categorized into four categories as shown in table 4.3 below.

**Table 4.3 How frequently audio visual aids are used by teachers**

| Audio visual aid | Not used | | Every lesson | | Once a week | | Twice a week | |
|---|---|---|---|---|---|---|---|---|
| | Freq | % | Freq | % | Freq | % | Freq | % |
| Flip charts | 11 | 33.3 | 15 | 42.4 | 3 | 9.1 | 5 | 15.2 |
| Handouts | 10 | 30.3 | 15 | 45.5 | 3 | 9.1 | 5 | 15.2 |
| Internet | 13 | 39.4 | 4 | 12.1 | 3 | 9.1 | 13 | 39.4 |
| Magnetic Boards | 29 | 87.9 | 0 | 0 | 4 | 12.1 | 0 | 0 |
| Models | 23 | 69.7 | 2 | 6.1 | 3 | 9.1 | 5 | 15.2 |
| Posters | 9 | 27.3 | 14 | 42.4 | 5 | 15.2 | 2 | 15.2 |
| Projected aids | 29 | 87.9 | 0 | 0 | 2 | 6.1 | 2 | 6.1 |
| Projectors | 29 | 87.9 | 0 | 0 | 2 | 6.1 | 2 | 6.1 |
| Radio | 8 | 24.2 | 6 | 18.2 | 4 | 12.1 | 15 | 45.5 |
| Radio Cassettes | 13 | 39.4 | 3 | 9.1 | 7 | 21.2 | 10 | 30.3 |
| Tape recorders | 13 | 39.4 | 5 | 15.2 | 5 | 15.2 | 10 | 30.3 |
| Television | 6 | 18.2 | 5 | 15.2 | 6 | 18.2 | 16 | 48.5 |
| Wall Charts | 0 | 0 | 17 | 51.5 | 5 | 15.2 | 4 | 12.1 |

Column 1 in table 4.3 above lists audio visual aids which teachers say they do not use. According to geography teachers in Madiany division the three audio visual aids which the teachers say they do not use are Magnetic Boards (90.9%) Projected aids (87.9%) and models (78. 8%).The reasons cited by the teachers why these audio visual aids are not used are that it is expensive or have not been purchased by the school and that the teachers lack expertise on how to use these audio visual aids.

Column 2 in table 4.3 above describes audio visual aids which teachers always use. These include handouts (60.6%) Posters and Wall charts (54.5%) Radio and Television (48.4%). The most used audio visual aids are handouts. These handouts are used always because they are readily available and are easy to acquire. These aids mentioned above are also cheap and the schools in Madiany division can afford them either from internet or as prepared by the teacher.

Column 3 of table 4.3 above describes audio visual aids which teachers use once a week. Three aids used once a week include internet (54.5%) Flip charts (42.4%) and Radio (39.4%).Results from interviews conducted with teachers in Madiany division show that audio visual aids are used by teachers once a week because teachers in other subjects also want to use them during their lessons. The syllabus is also wide meaning that the time allocated for a topic should be strictly adhered to if the syllabus is to be covered on time.

Column 4 of the table describes audio visual aids which are used twice a week. These include wall charts (12.1%) models (6.1%) and internet (6.1%).It is appropriate to use these aids twice a week so as to allow adequate time to cover the syllabus and also to allow other subject teachers apart from geography have access to the aids.

## CHAPTER 5

### 5.1 SUMMARY CONCLUSION AND RECOMMENDATIONS

The importance of using audio visual aids in teaching geography has been recognized for many years by educators. "We know that a large percentage of all things we learn are the direct result of visual and audio visual experiences. It is for this reason that no one concerned with teaching geography can afford to neglect the use of audio visual methods because their effectiveness has been established through means that suggest that most knowledge acquired from school comes through our ears and eyes. All the sense organs help us in understanding the environment therefore when selecting a suitable aid for teaching a geography class the teacher must be limited to what is readily available or can be made.

Proficiency in using audio visual aids comes from practice and success in enhancing lesson plans has been established from the use of audio visual aids. However by example radio broadcasts although an important audio visual aid in secondary schools with (81.81%) of teachers in Madiany division having a positive attitude for radio broadcasts, secondary school's management often ignore them. The ministry of education (School broadcasting unit) should device an efficient system of supplying broadcast support materials to schools. It is important to note therefore that even with positive attitudes towards the use of audio-visual aids some of them require other support materials which if not available may impact negatively if used by the teacher.

The first step towards such an ideal is to elicit the right attitude in the teachers towards these aids. Negative attitudes will preclude their effective use even if they are made available. And if that is the case attitudes will have to be corrected first before other steps are taken. If the attitudes are positive other problems can be solved to ensure maximum use of these important audio visual aids to enrich learning at our institutions.

Educational programs featuring geography and other subjects taught in secondary schools have been provided to students at a distance through correspondence courses, audiotapes, videotapes and limited use of public radio and television. However secondary schools in Madiany division still lack of trained personnel. In most cases the maintenance and service of equipment is done outside the school because very few have been trained. What this implies is that abilities of teachers are the key factor on material usage and must be mitigated by providing in service training side by side with introduction of the new audio visual aid to the school.

Experience from Madiany division has shed light and it has now become widely recognized that individuals have different learning styles, representing various patterns of involvement and sensory perceptions. This suggests that with increasing awareness among educators of their students' different styles of learning the tendency is to use more and more of the audio visual aids to facilitate learning. If we can at least increase the awareness of audio visual aids in all areas of geography and so enhance their use in classrooms, we shall have done a great deal to improve teaching learning situations. In this way our children's creative personal characteristics will be put to "practice" as required by the four basic principles of Art education.

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