Enhancing Learning of Geography: A Focus on Video Use

By

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Abstract

Prevailing poor performance by students in examination and misconception they hold about some topics in Geography have aroused concern in educational field on the cause and need to alleviate the situation. Conventional approach which is widely used need to be integrated with technological innovations in teaching to alleviate the situation of low enrolment and conform to expected national quality and standard in Geography. The Homa Bay district Mean Standard Score of 6 C+ has been recorded for the last four years and low enrolment as students tend to shy away from the subject. The main objective was to investigate if video can enhance learning. Cohn’s and Edgar’s theories on hearing, sight and learning experience arranged in hierarchy informed this study. The study adopted Experimental research design involving pre test-post test control group design. The target population was provincial schools in Homa Bay district. The sample size was 194. Stratified random sampling procedure was used to obtain four schools. The experimental group was exposed to video for three weeks and the control group was exposed to conventional teaching for the same duration. Both quantitative and qualitative approaches were used to collect data. Post-test was administered to all students and questionnaire to all respondents. Data was analyzed through use of inferential statistics which were t-test and Chi-square. Descriptive statistics that involved means, frequencies, percentages and standard deviation were also used. Hypothesis was rejected at significant level of 0.05. The results of the study show that use of video in teaching enhanced learning achievement. It was established that video motivates, enhance understanding, retention and participation. The findings of this study have created awareness and need for integrating video in teaching and learning for improved performance in Geography. The following recommendations were made. Use of video be supported at policy level, Geography curriculum to embrace ICT, teachers to be equipped with skills and knowledge they need to use video.

Keywords: Video use, Motivation, Understanding, Retention

1. Background of the Study

The introduction of western education in Africa brought in the teaching of Geography in the Continent. During this time, the teaching of Geography was merely based on memorization and mainly on description. For example, students had to memorize rivers, mountains, oceans, major cities among others without verification of the facts. What learners learnt during this time had very little relation to their own immediate environment and facts were not sequentially and logically presented to learners as it is today carefully organized knowledge and methodology. The facts supplied were collected from navigators, travelers, explorers and voyagers. The teaching of Geography was a global phenomenon. Since little or nothing was known about other parts of the world (Halacha, 2002), this culminated in the study of foreign regions such as Britain, USA, Canada, France, parts of India, Newzealand and Australia. During this time teaching was from unknown, for example, learners could talk emphatically and copiously on the prairie of Canada, pampas of Argentina, great lakes of USA, with little or no knowledge about their own local environment. Learners in Kenya knew little or nothing about their own country because Geography curriculum was more outward looking than inward looking. Later Geography was reviewed in consonance with societal needs. The teaching of Geography this time was more inward. The teaching took into consideration the potentials and resources. The teaching started from known to unknown, simple to complex, concrete to abstract which are in consonance with pedagogical principle of teaching. Taylor (2003) the new approaches adopted were as follows; localized teaching, where materials such as soil samples, crops, rock types were used elaborately in teaching and it inculcates in the learners the skills such as critical reasoning, sound judgment, keen observation, data collection techniques and analyses. In
outdoor approach, learners see things for themselves then give analysis of what they have observed and felt. And in learner centered, teaching always motivates and arouses learners’ interest.

In Kenya, the teaching of Geography has been thought of in terms of what it can contribute to the realization of the aims of secondary education. For example it is taught to give learners sound knowledge of their immediate environment, develop the ability to comprehend and explain natural phenomena, develop learners’ critical thinking, ability and accuracy and develop a comprehension of the spatial relationship and various features on the surface of the earth.

Video is more effective in teaching than text for presenting real-life situation in order to enhance learner’s satisfaction, comprehension and retention (Johnson & Choi, 2007). Though ICT is essential for effective teaching/learning, Muntaz (2000) says, lack of time is a factor that hinders technology integration in schools (release time & scheduled time).

ICT have potential for enhancing quality education by increasing learner motivation and engagement hence promoting shift to learner-centered environment. Learners can construct more complete mental summaries written a week after viewing the video than those written a week after listening to lectures. Video can present visual information that is more difficult to convey through conventional method for example students can visit erupting volcano and have a fieldtrip to rift valley without leaving inside classroom.

There has also been a National outcry by different people for example (Daily Nation 25/8/2011) Prof. Godia educational secretary said that there should be focus on ICT integration to enhance learning and productivity. Prof. Ongeri National News, standard (31/4/2010 & 24/8/2011) advocated for E-learning thus digitizing the content which can change way of learning and also address teacher’s shortage standing at 75,000. He expected ICT to boost quality of teaching and learning in schools.

Then the question arises such as how can learning be enhanced in Geography? How can students be encouraged to voluntarily choose the subject because according to statistics few students usually enroll for Geography. A further concern comes up when one considers the quality of learning by the student in other subjects therefore how well do students understand the concept they learn in the subject that they are taught. It has been evidenced that students have appropriated enormous quantity of detailed knowledge; they pass exams successfully but are unable to show that they understand what they have learned (Biggs, 2003).

The above background provides a basis in which the current studies sought to investigate the contribution which video use by teachers in their teaching could better their teaching, enhance learning and performance. Because of its nature, video has the ability to enhance teaching/learning abstract ideas. From literature review, video is associated with certain benefits in teaching or learning among them active learning, motivation, individualization, self-pacing and the ability of a video to address the problem of student understanding. Following the stated problem, there is need for improving teaching/learning Geography, but one may wonder to what extent videos are actively being put into use in class rooms.

**Statement of the Problem**

Geography is a social science which deals with the world. However teaching of some units such as physical environment remains a challenge to teachers as students do not score well questions in such units. In Homa Bay District, the problem is critical in the sense that the mean score has remained at 6.3951 grade C+ for the last four years. It was also noted that the enrolment is very low as students tend to shy away from the subject; this was evidenced after a comparison was made between Geography, History and CRE for the year 2010. This is probably because of teaching methods or techniques employed. Teachers mostly use traditional methods which encourage rote learning hence less retention
the role of the teacher in the classroom is important. The teaching approach that the teacher may adopt is one factor that may affect performance and attract students to enroll. Many studies support that use of video can enhance learning. It is an instructional media which is generally recognized as a powerful means to boost students’ achievement (Kulik, 2002; Cray & Connel, 2002).

In response to these, the broad objective was to investigate if video can enhance learning of Geography and the null hypothesis stating there is no significant difference between learners taught using video and those taught without video was tested at significance level of $0.05\alpha$.

2. Methodology

This study was conducted in Homa Bay district, Homa Bay County. The district was purposively chosen as the area of study because mean standard score of Geography is under performed. The study was experimental research design involving pre-test post-test control group design. The experimental groups were taught using video while control groups were taught with conventional classroom teaching methods (lecture, assignments). The schools were randomly assigned to control and experimental groups. All groups were pretested. Finally posttest was administered in order to measure the degree of change in achievement.

The target population was eight provincial secondary schools, 51 Geography teachers and 1052 students. The unit of sampling was individual learners in a classroom because classes operate as intact groups. Stratified sampling was used to obtain two boys and two girls schools. Simple random sampling technique was used to select four schools and Geography teachers. Simple random sampling was used to give accurate information about the groups (Mugenda & Mugenda, 2000). From each stratum, streams were randomly selected in each of the four schools. The number of students per class depended on the school enrolment therefore the study concentrated in few chosen schools which had the following number as indicated in table 1 below:

<table>
<thead>
<tr>
<th>Table 1 Number of Students per School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
</tr>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>Experimental</td>
</tr>
<tr>
<td>Experimental</td>
</tr>
<tr>
<td>Control</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

Therefore the sample size in this research was 194 form two students. Frenkel and Wallen (2000) recommended at least 30 subjects per group. Hence this number was adequate for the study.

The research instruments were Pretest used to collect a data on study participants’ level of performance before intervention took place, Post-test(GAT) used to measure the students’ achievement and Questionnaire used to collect open ended and closed questions on use of video. CD was purchased from KIE was used for teaching. Pretest and post test was used because they showed students’ understanding. This was used to test the Ho if there was difference between achievement in control and experimental groups. Form two textbook and questions from KNEC past papers, this increased content validity. The streams were randomly assigned in order to obtain high control of the external and internal validation. A piloting study was conducted in two schools which were not part of the study, test-retest method were used to ascertain reliability and the results of the post test exams were checked through inter rater reliability where one test was administered once and scored by two groups. The reliability was at coefficient of 0.76. Hence it was considered reliable in accordance to the recommended minimum reliability coefficient of 0.70 for experimental research purpose (Wallen & Fraenkel, 2000). Both descriptive and inferential statistics were used to analyze the data. Descriptive statistics included...
calculation of means and standard deviation. Inferential statistics, a t-test was used to ascertain whether or not their mean score differences were significant at either 0.05 or 0.01 levels.

3. The findings and Discussions

This study assessed the effect of video use in teaching and learning Landform in Geography on academic achievement in secondary schools in Homa Bay District.

The scores obtained in pre-test were relatively low, this could be attributed to the fact that the topics are abstract in nature. Control group had a mean of 5.8 and experimental 6.1

Table 1 indicates variability in the mean obtained by different groups. The differences in the mean may or may not have been caused by chance. To ascertain an independent samples t-test was carried out, at a significant level of 0.05α. The following were the results of inferential statistics.

<table>
<thead>
<tr>
<th>Df</th>
<th>Sig. (2 tailed)</th>
<th>Mean difference</th>
<th>Std err diff</th>
<th>95% interval of the diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>0.000</td>
<td>2.003</td>
<td>0.106</td>
<td>0.840</td>
</tr>
</tbody>
</table>

The study carried out the t-test on the means of experimental and control group to find out whether the means are not significantly different. The independent t-test had a p-value of 0.000 as shown in table 2. The p-value was less than the alpha level which is 0.05α. From the outcome it can be inferred that there is significant difference in the mean of the control and experimental groups. It can therefore be concluded that there may be a group which had added advantage over the other. Meaning the entry behavior of the groups may not be similar.

Post-Test Analysis of Data

After a period of four weeks of learning landform topic a post test was administered to all groups. This time the means were relatively high as compared to the pre-test. This could be attributed to the teaching programme that had been in place before the post-test. It was realized that experimental students who were taught by use of video achieved statistical significantly higher score in the GAT compared to those taught through conventional method. A breakdown of the results revealed the following means for the different groups that sat for the post-test as indicated in Table 3

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>7.2</td>
</tr>
<tr>
<td>Control</td>
<td>6.1</td>
</tr>
</tbody>
</table>

At group level, experimental group had a mean of 7.2 and control had 6.1. The descriptive analysis shows a possibility of experimental group being superior in achievement. However, this can only be confirmed by an inferential statistic that will be carried out at a later stage. The minimal difference in post test means of the two groups then mean that pre-testing may have influenced post test means. The competence of experimental is attributed to the video treatment they received.

<table>
<thead>
<tr>
<th>Df</th>
<th>Sig. (2 tailed)</th>
<th>Mean difference</th>
<th>Std err diff</th>
<th>95% interval of the diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>0.000</td>
<td>0.016</td>
<td>0.070</td>
<td>0.160</td>
</tr>
</tbody>
</table>
An independent samples t-test was carried out on the data for the purposes of inferring from the data and testing of the hypothesis. Pre-testing had no statistically influence on post test scores in the study as shown in Table 4.

The study sought to test difference in means of experimental group and control group. This aimed at testing effectiveness of video as opposed to conventional methods of learning. The t-test p-value was 0.000 as shown in Table 4. The t-test p-value is lower as compared to the set alpha level of 0.05\(\alpha\). This indicates that there is a statistically significant difference in the post test means of experimental group and control group. The difference is in favour of experimental group that was exposed to video.

It leads to a conclusion that video is effective in enhancing student’s achievement in learning the topic Landform in Geography as opposed to conventional method of learning. This finding is in agreement with the findings of several other researchers’ findings. Hanson Smith (2004) from Australia found out that video based learning in Geography improved achievement among learners. Hence the use of video in learning Geography at secondary level is documented to have low usage.

Moreover the interactive nature of work with video, offered opportunity for students to develop greater understanding of many Geography concepts which they met. Other researchers have also found out that video is effective as a mode of teaching and learning in several other areas. Video based learning in Geography has been found to improve achievement among the learners. This could be attributed to the fact that using video as a way of teaching / learning meets varied demands of the different individuals at individual level (Vincent 2003). This implies that video as an instructional media is more effective in enhancing students’ performance.

The study at this point contributes towards the existing evidence that video is effective in enhancing learners performance in Geography as measured by achievement. It can be recommended with confidence that using video in Kenyan secondary schools will improve poor performance in Geography.

<table>
<thead>
<tr>
<th>Table 5 GAT Post-test Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

**Figure 1 GAT Means by Groups**

![Figure 1 GAT Means by Groups](image-url)
Hypothesis was, there is no significant difference between learners taught using video and those taught without video and accept the alternative hypothesis which states, there is significance difference between learners taught using video and those taught without video. Video is effective in enhancing achievement in Geography. The results revealed that video is more effective on the originally poor performing students, the number of students getting poor grades have drastically improved.

**The Influence of Video Use in Teaching and Learning Landform in Geography**

Video had positive influence on learners who used it in terms of motivation and retention which finally leads to understanding. Therefore the experimental group performed better than the control group. The respondents were asked to show the level at which video has influenced their learning in the following areas motivation, retention and interesting. Figure 2 revealed that control group had low levels of influence on video use and experimental had high influence on video use this translates to enhanced learning.

**Figure 2 Influence of Video in Learning**

![Figure 2 Influence of Video in Learning](image)

**Motivation**

Figure 2 indicates that 83.4% of respondents from the experimental group agreed that video is motivating when used in teaching. Students were motivated to study on their own thus watched at their own time. This practice would enhance understanding and retention. Students’ motivation was increased when they felt some sense of autonomy in the learning process. Video provides a supportive teaching style that allows student autonomy to increase student interest, enjoyment, engagement and performance. Students perform best when the level of difficulty is slightly above their current level. If the task is too easy it provides boredom. If the task is too difficult may be seen as unattainable, may undermine self-efficacy and create anxiety (Reave & Hyungsttim, 2006). The processes of landform (volcanicity, faulting and folding) were slightly above the students’ ability, therefore students were motivated to watch the stages of formation and some responses solicited were;

*It was amusing, interesting and motivating to watch process of volcanicity, ways in which solid, liquid and gaseous materials are forced onto earth’s crust and onto its surface within a minute.*
It’s interesting and therefore motivating to rewind the video to watch the processes leading to formation of various folding activities and features such as simple fold, overfold and isoclinal fold. After watching at a slow speed I’m now able to picture it in my mind.

However while all teachers hope their students will be self motivated, some need more extrinsic motivation than others. Even motivated students occasionally need their teachers to prompt them to complete their tasks. Therefore students were assigned projects to capture their interest hence motivated. In the study, video projects and collaborative activities contributed to keeping students on task. Video is motivating because the students enjoy themselves so it is important to maintain this engagement. The students also enhanced their interpersonal relations by actively participating in teaching communication skills through use of video and computer technology. It is widely accepted by other researchers that student motivation is a key element within the learning process. Educational literature has proven the positive effect of using technologies as a support tool for enhancing learning efficacy. These technologies capture student’s attention as students are familiar with them and they can easily use these tools. Marx & Frost (2003) suggest that video can be a powerful motivator and content setter for student learning.

In the control group, the main teaching was chalk and talk, the results revealed that only 46.1% agreed that video can motivate their learning. A student may arrive in a classroom with certain degree of motivation but, the teacher’s behavior and teaching style will determine student’s level of motivation. Motivation had strong effect on enhancing academic achievement. This has been evidenced by results in this study where the experimental group achieved better than control group. Allen et. Al., (2008) & Compell, (2007) have suggested that motivational construct have a positive impact on academic success in academic performance in instructions.

Retention

Figure 2 has revealed 69.7% experimental respondents agreed that they can use video repeatedly at their own time and pace, rewind to get what was not understood during the lesson, video techniques increase retention because students use it in addition to methods used. In this way learning continues beyond the walls of the classroom and beyond the normal hours. Video was viewed by students outside class time thus classroom was flipped. They also watched in a more relaxed environment this offered them a chance to review the content at their own pace. This enhanced understanding of the content taught and therefore video teaching improve performance in Geography.

Teachers wishing to maintain full attention of students are advised to be interested in new instructional methods. Post-test results revealed that students taught by conventional method scored lower grades as compared to those who were taught with video. Students who watched video showed better attention and retention of the subject matter. It was revealed from the study that video is a powerful tool that enhance retention hence improve academic performance. This was evidenced by students’ responses stating; I retain best by listening to video, promotes retention skills than lecture thus agreed that video based teaching enhance retention. Watching video improves the efficiency of learning process. After watching, they asked questions this was assign of motivation, commitment and interest hence retention. They also considered video as enjoyable way of introducing the subject and a mean to increase motivation, understanding and retention. This has been supported by several researchers. Zull (2002) why video can be used to impact classroom learning is to fully capture students’ attention and enhance learning. Research suggests that video can be used to deepen learning by eliciting emotional responses tired to music and other emotional stimuli. However having students serve as passive spectators in the classroom may encourage a drop in attention and decreases their retention knowledge. Drop in attention was avoided by the teacher when presentation was varied. The finding of the study showed knowledge retention was highest for students who received treatment. It can also be concluded that traditional lecture is ineffective in the knowledge gain and retention. This finding supports the work of Young et. Al., (2009) who found out that lack of engagement brought on by students being passive spectator in the classroom led to decreased retention of material.
Enhancing Learning of Geography: A Focus on Video Use

At present students are reluctant to learn Geography, on the other hand not the college entrance examination subject and does not test very good combination. This requires that teachers must enhance geographic knowledge in teaching Geography. Therefore video is a superior tool that can be used to solve the problem. And this was proven as higher retention was displayed in this study.

In figure 2, the control group who agreed that video can enhance their learning were 43.6% this is quite low as compared to experimental group. This is because rote memory is unfortunately the commonly required memory for students in secondary school. In this type of learning students memorize and soon forget facts. From the results it’s noted that there is relationship between achievement and retention. Students who have high retention rates perform better. This is evidenced by results achieved by both groups. Mean score of control (6.1) being lower than the experimental (7.2). It also a show that conventional is an inferior way of teaching landform. Thus teachers have repeatedly acknowledged the drawbacks of teaching with a strict lecture method format. Afe (2002) & Olokulehn (2007) teachers’ effectiveness depends on the use of appropriate instructional strategies and video portray good teaching techniques and successful learning.

Understanding

The results from the experimental group in figure 2 revealed that understanding had the highest influence on video use, 89.3% agreed that using video leads to greater understanding of the topics covered (Landforms). It further revealed that video can help clarify difficult areas in Geography. Therefore lessons in which video is used are more beneficial to students than conventional method. After watching, students asked teachers to continue using video since it supported their learning process. Teachers also observed that the lessons in which they used video students had fewer doubts. Thus a well designed active learning is an active way of students learning. Reflective video has benefited both teachers and students since video is an effective tool in assisting students in visualizing and subsequently correcting their errors. According to the study of psychology and information storage, simple memorization; can read 10%, can hear 20%, can see 30%, thus combining reach 60%. This shows that Audio-visual teaching of Geography has a role in enhancing students’ understanding.

Understanding was further revealed by active participation in class during the lesson. During presentation students were asked to watch video, record what happens, write their reports and later read at the end. This ensured students engagement with video and understanding without realizing it. Large clear photographs may serve as a source of information and reference but some students do this without deeper understanding process of landform formation, but with video students had deeper understanding. However video is a passive way of the learning

Based on the results, it was revealed that video have powers to assist in map interpretation and also provide students with avenue for learning geographic concepts such as landforms. Several other articles have discussed the potential impact of using video. Herron, Cole and Corrie (2000) offer evidence that showing videos in the classroom allows teachers to expose learners to authentic information. Since Geography is different from other disciplines it requires students’ understanding, grasp and remember some of the many sense of the basics. The researchers affirm that students often memorize these abstract, dull, complex geographic names the concept of geographic features in distress and even some students think the trick is to learn Geography is by rote methods. Therefore Biggs & Ramsden (2003) active learning involves student focused approach. However Ramsden (2003) notes that student activity does not itself imply that learning will take place.

Active learning took place in the classroom by using video to explain and understand appropriate pedagogic content. Imaginative classroom based activities promoted student engagement and understanding as students were able to explain the content. It is clearly indicated that performance was
improved by interventions of students’ understanding. Students explained in few sentences various questions as an indication of deeper understanding.

This conclusion is based on responses derived from respondents as given in the open ended part of questionnaire. One girl in her response said, “I’ve now understood and able to differentiate types of faults such as normal, reverse, tear and anticlinal faults.” A picture is more than a thousand words. According to students, the videos captured their interest because they could watch various landform processes which were interesting scenes. Students watched video after being lectured and this stimulated debate within the classroom, video introduced to clarify a classic problem of this subject which relies on complexity of the processes and difficulty of explaining them in simple and fast manner using conventional method. An explicit explanation which usually needs two to three pages has been replaced by a video which only lasts 15 seconds hence improves understanding and performance.

The control who agreed that video enhance understanding were 44.7%, the teacher centered convectional classroom teaching does not help students to understand the complex concept. Students at the end of the topic are left behind struggling to understand the notes given. This method promotes rote learning where students have huge memorized knowledge without deeper understanding. This is supported by Hew & Bush (2007) who said that conventional method which reinforce the memorization of factual information and do not promote deeper understanding. Beshmizen & Van Putthen (2000) declared that video can help teacher to work more closely with the learner and reduce the need for repeating explanation in teaching.

Table 6 Chi-Square on Influence of Video in Learning Landform

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Control group $\chi^2$</th>
<th>Experimental group $\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helps students to revise</td>
<td>Value = 13.647, df = 4, P-value = 0.009</td>
<td>Value = 40.872, df = 4, P-value = 0.000</td>
</tr>
<tr>
<td>Easy, faster &amp; interesting</td>
<td>Value = 2118, df = 4, P-value = 0.714</td>
<td>Value = 69.494, df = 4, P-value = 0.000</td>
</tr>
<tr>
<td>Improves achievement</td>
<td>Value = 42.706, df = 4, P-value = 0.000</td>
<td>Value = 76.353, df = 4, P-value = 0.000</td>
</tr>
<tr>
<td>Enhances understanding</td>
<td>Value = 19.647, df = 4, P-value = 0.001</td>
<td>Value = 122.176, df = 4, P-value = 0.000</td>
</tr>
<tr>
<td>Video promote retention</td>
<td>Value = 6.235, df = 4, P-value = 0.185</td>
<td>Value = 42.941, df = 4, P-value = 0.000</td>
</tr>
</tbody>
</table>

N = 194

Students were asked if video could enhance their learning, with reference to Table 6, the results revealed that experimental group accepted that video can enhance their (81.2%) learning. In experimental group the test gave a p-value of 0.000. The p-value is less than alpha level of 0.05, on the analysis it leads to a conclusion that there is difference between influences on learning when students are exposed to video. Hence video turned out to be an effective learning tool as reflected by experimental students’ perception. Experimental group responded in the same way that video helped them (86%) effectively in facilitating comprehension of the abstract concepts involved in the landform process. Video made classes are more motivational and consequently, the improvement in the teaching / learning, enhance students’ ability to learn an autonomous way and hence understanding. Therefore video can attract more students to enroll in Geography as it reduces absenteeism in Geography class since students prefer short videos rather than long written paragraphs. Video greatly enriched the contents of Geography classroom teaching. This was evidenced by experimental group achieving high scores than control.

Nevertheless, we should bare in mind that video must be accompanied by other methods of teaching. The control group had negative responses with p-values greater than alpha. This implies that there is no relationship between influence of learning when students are exposed to video and when students are exposed to conventional learning in Geography. However the group accepted that video can enhance understanding a p-value of 0.001 and that video improves achievement in Geography a p-value of 0.000 less than alpha level. They showed satisfaction with use of video. Fatumbi (2005) discovered that there is improvement in teaching process through use of video.
According to the finding in figure 3 there is relationship between retention, participation, motivation and understanding and overall academic achievement. The four factors have influenced the academic achievement of the experimental group. Teachers active teaching enhanced learning hence motivated students to mastery, understanding, retention and participation.

These factors have remarkably enhanced students learning Landform processes. Video increased memory, comprehension, understanding, participation and learning when compared to conventional teaching. There was limited opportunity for students to study and describe complex systems and thus students congratulated teachers for having used video in teaching because it supported their learning process by providing complementary material. This motivated the teachers to continue using video especially in quantitative topics in which students had difficulties in understanding.

**Figure 3 Influence of video**

![Bar chart showing influence of video on participation, retention, motivation, and understanding.](chart)

Video can capture complexity of classroom interaction and allow teachers to illustrate exemplary practices represent the dilemmas teachers encounter in their day to day practices. Therefore video is an effective way of teaching and it alleviates poor performance in Geography and improves enrolment. This has been supported by Tella, Yobo & Andika (2009) the key of ensuring equity in education is effective use of technology employed in a flipped this is further supported by Isiaka (2007) who researched on effectiveness of video as a media found that video group performed better than the group without. Champout (2005) concluded that supplementing lectures with visual material enhances the learning of the student. For the achievement of the students, the media used must be effective. The researchers found that video is becoming effective tool for assisting students in visualizing and subsequently correcting their errors (Levy & Kennedy, 2004).

### 4. Conclusions

Based on the results of this study, it can be concluded that video facilitates students’ learning in Geography is better compared to conventional teaching. Video based learning of Geography is more effective on lower ability students who were previously perceived as ‘weak and therefore it can enhance learning. It is one technique of teaching that rises above the challenges of performance. Video creates a good general atmosphere in class leading to greater confidence and enjoyment among the students than was achievable when using traditional teaching method alone. Teachers who understand the importance
of visual images are well placed to exploit the potential of video to support their teaching. From the findings the participant teachers see video as having an important pedagogical role to play. This means that the use of video in teaching of Geography at secondary school level can address the poor performance and the low enrolment in the subject.

5. Recommendations

- Use of video should be supported at policy level.
- Geography curriculum to embrace ICT.
- Teachers should be equipped with skills and knowledge they need to use video in teaching.

References


