

## **Integrating Audio-Visual Techniques in Kiswahili Oral Skills Instruction: Implications for Teaching and Learning Public Secondary Schools in Kenya**

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### **Abstract**

Educators endeavor to enhance the learning experiences by incorporating innovation and student-centered methods. Different instructional techniques are embraced in the process of learning Kiswahili yet the performance is still low. The purpose of this study was to assess the effectiveness of Audio-visual in teaching and learning of Kiswahili. The study was guided by the following objectives: to examine the difference between the Kiswahili performances of students taught using Audio-visual and those taught using conventional technique in public secondary schools in Kenya. The population of this research comprised of 571 form two students. The study was guided by Cognitive Theory of Multimedia Learning by Richard Mayer. This study employed Quantitative research design thus positivism philosophical paradigm. It utilized a quasi-experimental research design; instruments used were Pre-test and the Post-test of both the control group and the experimental group and content validity was used. Null hypothesis was tested at  $P \leq 0.05$  Spearman Rank Co-relation was used to determine the degree to which each student's rank in one set of scores tends to be correlated with a rank on another set of scores. Two-tailed tests were used to measure the significant difference in means between the groups. Simple random sampling was used to determine which class were the experimental group and the control group. Based on the findings of the study, it was evident that the mean scores in Control group was 41.7 (SD = 15.8), whereas the mean in Experimental group was 54.1 (SD = 16.3). A Welch two-sample t-test results showed that the observed difference was statistically significant,  $t(1138.5) = -13.013$ ,  $p < 2.2e-1616$ . The results from the first independent t- test for Kiswahili scores indicated that indeed there is a significance difference between the mean of those students who used the conventional means and those students who used the Audio-visual. The mean score for the pre-test was 46.2 (SD=17.9), while the mean score of post-tests was 60.8 (SD=10.1). The t-test results  $t(312.19) = p < 0.0001$  and a at  $P \leq 0.05$  level revealed that the difference lies in the interval of [ 11.77187 – 17.44789]. The Spearman's rank correlation  $\rho = 0.5521$ , with a p-value  $< 2.2e-16$ . It was therefore, concluded that the provision of Educational Audio-visual for teaching in schools has a positive impact on the student's performance and should be accorded top priority by stakeholders in the education sector. The study recommended that curriculum planners should encourage the utilization of Audio-visual materials in teaching/learning in schools by ensuring the inclusion of their usage in the Kiswahili curriculum at all levels.

**Key words:** *Audio-visual, Oral Skills, Kiswahili, Teaching, Learning*

## **1.0 Introduction**

Kiswahili consists of four essential skills: listening, speaking, writing, and reading. All of these skills hold equal significance, as it is evident that those who possess knowledge of Kiswahili are commonly known as "speakers" of the language. (Akivaga & Odaga, 2018). As such, it is crucial for a Kiswahili educator to inspire their students to excel in the language, particularly in terms of oral proficiency. The skill of effectively communicating in a secondary language plays a significant role in a student's academic achievements and future success, as stated by Brame, (2015). It is a dynamic form of expression that allows individuals to connect and share their perspectives, beliefs, and experiences with others. The power of speaking lies not only in the words we choose, but also in the tone, body language, and facial expressions that accompany them. It is a fundamental aspect of human interaction, allowing us to build relationships, convey emotions, and convey complex ideas as highlighted by Hixon, (2019.)

## **1.1 Problem Statement**

Oral skills are important because they allow people to express themselves and interact with others on a daily basis. Kiswahili teachers have used a variety of teaching aids other than audiovisual aids, but their performance remains poor. Records obtained from the schools studied revealed that students have performed poorly over time, with more than half of them failing the prescribed assessment protocols.

Empirical researches have looked into the use of instructional materials in teaching and learning. Despite all of the research on Audio-visual materials, no research has been done on the utilization of Audio-visual in teaching and learning Oral Skills in Kiswahili, particularly in Turkana County. According to SDG4, it emphasized the education inclusion and equity. Daniel, (2018) puts it clear that equitable education is concerned with helping students develop their potential learning abilities without experiencing any barriers. Speaking is considered the foundation for other skills. As Dahar (2017) points out that "Learning to speak a language is always by far the shortest road to learning to read and to write it". This is why students find it difficult to communicate appropriately in their second language. This problem may be due to limited practice and lack of exposure to the target language. Therefore, teachers should use Audio-visual multimedia and animations in their classes to promote interactive learning and activities to strengthen their speaking competence as highlighted by Basic Education Statistical Booklet 2020 on the Education Policy Framework and Structure to ensure national socio-economic transformation. To this end, the Government of Kenya (GoK) is committed to providing quality and inclusive education and training, as well as a robust platform for research, to all Kenyans. This is evidenced by the provisions of the Constitution of Kenya. Specifically, Articles 43(1)(f) and 53(1) (b) of the Constitution provide for the right to education and the right to free and compulsory basic education, respectively. With the rapid advancement of technology, incorporating instructional Audio-visual and other multimedia into the classroom has become an essential tool in language learning. These multimedia resources provide students with exposure to spoken language in various forms such as dialogues, plays, stories, and interviews. This exposure is crucial as it allows students to not only hear the language being used, but also see it being used in context. As Gaudin

(2015) point out, animation and onscreen information provide a different learning experience from traditional printed text. This is highly beneficial for the development of critical thinking and oral skills in students.

## **1.2 Objective of the study**

The objective of the study was to examine the difference between the Kiswahili performances of students taught using Audio-visual and those taught using conventional technique in public secondary schools in Kenya.

## **1.3 Theoretical framework**

Richard Mayer's Cognitive Theory of Multi Audio-visual media learning is relevant to this study because it guides us in determining the effectiveness of the Audio-visual in teaching Oral Skills. Multimedia learning, also known as multimedia instructional design, is a prominent theory in the field of educational psychology. It focuses on how individuals process and retain information through the use of various forms of media, such as text, images, videos, and audio. This theory was developed by Richard E. Mayer, a professor of psychology at the University of California, Santa Barbara, and has been widely studied and applied in educational settings.

The cognitive theory of multimedia learning, according to Mayer, is based on three main principles: the dual-channel assumption, the limited capacity assumption, and the active processing assumption. According to the dual-channel assumption, individuals have separate channels for processing visual and verbal information. This means that when presented with multimedia, learners are able to process both visual and verbal information simultaneously, leading to better understanding and retention of the material.

The limited capacity assumption, on the other hand, suggests that individuals have a limited capacity for processing information. This means that presenting too much information at once can overload a learner's cognitive resources and hinder their ability to learn and retain information. As a result, multimedia designs should strive to present information in a way that is manageable for the cognitive capacity of the learner. (Akivaga & Odaga, 2018) The active processing assumption, the third principle, emphasizes the importance of learners actively engaging with the material in order to promote learning. This can be achieved through various strategies, such as including interactive elements in multimedia presentations, encouraging learners to generate their own connections and associations, and providing opportunities for reflection and application of the material.

## **2.0 Literature review**

In today's digital age, educational videos have become an integral part of the learning process. With the rise of online education, these audiovisual resources have gained immense popularity among students and educators alike. For example, Grant (2020) investigated students' perceptions of the usefulness of educational videos in both online and on-site learning environments. One of the most popular mediums is videos, which offer a visual and auditory approach to learning.

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However, written texts still hold a crucial role in the education system (Christine, 2019). The texts have the benefit of being easily searchable, allowing students to find specific information or review key concepts quickly. This not only saves time but also promotes efficiency in studying. Moreover, written texts encourage active reading, a practice that has been proven to be highly effective in learning. By actively engaging with the material through annotation, highlighting, and taking notes, students are able to comprehend and retain the information better.

Daniel, (2018) Videos are a valuable resource for developing oral skills in language learning. They offer a dynamic and engaging way for students to practice speaking and improve their pronunciation and intonation. In addition, videos can be used in various ways to promote discussions and enhance dialogue creation among students. One effective way to use videos in developing oral skills is through film discussions. Dahar (2017) highlighted that by discussing and analyzing different films, students can improve their speaking abilities as they share their thoughts and opinions. This not only helps with their vocabulary and grammar, but also encourages critical thinking and communication skills. Another creative way to use videos is by having students watch a film clip without sound and create their own dialogue. This exercise not only challenges students to use their imagination and language skills, but also allows for a more interactive and collaborative learning experience.

In a survey conducted by Hixon (2019), it was found that students have a positive perception of using English movies to improve their speaking skills. This further supports the idea that videos can be an effective tool in developing oral skills. However, it is important for teachers to be reminded to incorporate various instructional media, such as videos, in their teaching to facilitate effectiveness. However, the study was limited in its applications since the scope was small, therefore, it could have been illustrative if the scope was broader.

In Nigeria, Gaudin (2015) investigated the differences in the achievement of pupils taught using audio instructional package on basic school pupils' performance in English pronunciation and those taught using the expository method. The findings indicate that the pupils taught using the audio instructional package performed significantly better than those taught using expository method which is pivotal to the study at hand since it will guide on the performance of the learners. However, In Kenya, Achola et al. (2016) found that teaching using various instructional materials improved the performance of learners in various learning activities including ability to write dictated words. The study concluded that mandatory use of instructional media should be established while teaching to enhance English language subject because instructional media are an integral part of English language teaching which is pivotal to our study because it helps to predict the expected performances of the learners thought using videos, even though the method that was used was not the same as the one used in the study at hand.

The necessity of different learning activities for teaching with video is emphasized by many researchers and educators, such as Grant (2020) who brought up a very important claim that the use of pre- and post-viewing activities in their project called 'The Film Circle' successfully fulfilled the role of scaffolding and motivated pupils to speak, which was the primary goal of their experiment. 'The Film Circle' represented a structured group project where five high school pupils

were assigned different roles to perform according to their abilities and interests. Each pupil in the group had to analyze a film from a different perspective and present conclusions.

After viewing the film, the pupils worked in their groups, taking turns to present the information they gathered and participated in a discussion of the film they had seen. The discussion was very basic, often with pupils asking and answering simple questions or reading their observations out loud. More importantly, the conclusion that Chang et.al (2019) made after having conducted their project was very significant in that pupils can rise to their teachers' high expectations and improve their English, if the latter set attainable communicative goals for their pupils and design motivating interactional activities with adequate support, i.e. scaffolding. However, the study was limited in its applications since the scope was small; therefore, it could have been illustrative if the scope was broader.

### **3.0 Materials and methods**

This study was Quantitative research, using a quasi-experimental research design which adopted empiricists' paradigm (Hayes, 2022; Creswell & Creswell, 2023). It had manipulation of groups, control group which did not received experimental treatment, their performance provided a baseline against which the effect of the treatment was measured and the randomization where the researcher assigned study participants to control or experimental groups randomly. It was an intact group pre-test – post-test control design which involved a group of students in the experimental group and those in the control group, the experimental groups were exposed to the special treatment using Audio-visual and the control groups were exposed to the conventional technique without Audio-visual namely textbook-based as the teacher usually does.

The instruments underwent pilot phase in two county secondary schools in West Pokot County. The objective of the pilot was to assess their validity and reliability credibility (Creswell & Creswell, 2023). Accordingly, the instruments were modified where applicable with the assistance of the experts. The population of this research included 571 form two students of 12 County secondary schools in Turkana County. The researcher took two classes in each school as the sample of the research. The research used the cluster random technique; it is the sample selection in which all members of the population are naturally grouped in units (Andrew, 2022)

## 4.0 Findings and discussion

### 4.1 Control groups before the introduction of the Audio-visual

Table 1

Schools	Pre-video	
	Control	Treatment
Students marks in percentages		
A	54 ± 09 <sup>ab*</sup>	41 ± 17 <sup>bcd*</sup>
B	42 ± 22 <sup>cd*</sup>	42 ± 12 <sup>bc*</sup>
C	53 ± 09 <sup>abc*</sup>	32 ± 10 <sup>def**</sup>
D	24 ± 10 <sup>c*</sup>	32 ± 08 <sup>def*</sup>
E	45 ± 07 <sup>bc*</sup>	25 ± 12 <sup>f**</sup>
F	47 ± 14 <sup>bc*</sup>	48 ± 10 <sup>ab*</sup>
G	54 ± 08 <sup>ab*</sup>	55 ± 08 <sup>a*</sup>
H	58 ± 14 <sup>a*</sup>	49 ± 11 <sup>ab*</sup>
I	45 ± 08 <sup>bc*</sup>	30 ± 20 <sup>ef*</sup>
J	35 ± 10 <sup>d**</sup>	55 ± 10 <sup>a*</sup>
K	42 ± 22 <sup>cd*</sup>	45 ± 12 <sup>b*</sup>
L	49 ± 11 <sup>abc*</sup>	34 ± 09 <sup>cde**</sup>

The results from the pairwise comparison of schools in table 1 shows that school H, J, and D have revealed a notable difference in their means. This significant difference highlights the varying performances of these schools, both before and after the introduction of the Audio-visual. Interestingly, the comparison also showed that the differences between the schools were not consistent, indicating that each school responded differently to the Audio-visual.

Further analysis of the data in Table 1 reveals that only three schools, C, E, and F, exhibited statistically significant differences between their pre and post video results. This suggests that the Audio-visual had a varying impact on these schools, with some schools seeing a significant improvement in their results, while others did not experience much change. This finding highlights the importance of considering individual school contexts when implementing new teaching methods, as the same approach may not yield the same results for every school.

The mean examination marks (percentages) of students in twelve schools were recorded in the table 2, showcasing the effects of the Audio-visual on both control and treatment groups. The means with different small letters and asterisk (\*) superscripted on them indicate significant differences between the schools ( $P > 0.05$ , LSD test). This statistical analysis further supports the notion that the Audio-visual had varying impacts on each school, with some schools seeing a significant improvement in their students' marks while others did not.

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## 4.2 Control and treatment after the introduction of audio-visual

Table 2

School	Post-Audio-visual	
	Control	Treatment
	Students marks in percentages (%)	
A	44 ± 10 <sup>d**</sup>	57 ± 17 <sup>abc*</sup>
B	54 ± 18 <sup>bc*</sup>	50 ± 20 <sup>de*</sup>
C	37 ± 08 <sup>d**</sup>	51 ± 10 <sup>cde*</sup>
D	46 ± 08 <sup>cd**</sup>	65 ± 09 <sup>ab*</sup>
E	57 ± 09 <sup>b*</sup>	56 ± 13 <sup>bcd*</sup>
F	59 ± 17 <sup>b*</sup>	60 ± 08 <sup>abc*</sup>
G	44 ± 09 <sup>d**</sup>	66 ± 06 <sup>a*</sup>
H	59 ± 11 <sup>b*</sup>	61 ± 09 <sup>abc*</sup>
I	67 ± 12 <sup>a*</sup>	46 ± 13 <sup>ef**</sup>
J	55 ± 14 <sup>bc*</sup>	38 ± 18 <sup>f**</sup>
K	54 ± 18 <sup>bc*</sup>	46 ± 20 <sup>ef*</sup>
L	59 ± 13 <sup>b*</sup>	59 ± 13 <sup>abc*</sup>

Results in table 2 show that there were statistically different scores for the different schools. Schools I, L, F, G are statistically different from others and that their results differ from the others. The pairwise comparison within the schools shows that several schools had a statistically different result between the control and treatment cohort. This is to say that there was a difference from the students who used the videos and those who used the conventional ways in that those who used Audio-visual shows an improvement in their performance, this therefore supported the statement given by Mayer's theory emphasizes that the brain processes information through multiple channels, depending on how it is presented. The first channel is for visually represented material, such as pictures and videos, while the second channel is for auditory represented material, such as spoken words. This explains why students who used Audio-visual resources showed a greater improvement in their performance, as they were able to process the information through both visual and auditory channels.

When a learner is presented with visual information, it is captured in their sensory memory for a brief moment. This allows the brain to process the information in its entirety before it is transferred to the working memory. Similarly, auditory information, such as spoken words, is also logged in its entirety in the sensory memory before being processed in the working memory. Auditory information includes spoken words in a narration and other non-verbal sounds, and these are processed by the brain separately from the visual. As a learner is learning, the new material first gets logged in their sensory memory. For a brief moment, the image is captured in its entirety, or the spoken words are logged in their entirety. After that initial moment, the learner must begin to work with the information in order to process it and learn, this happens in the working memory.

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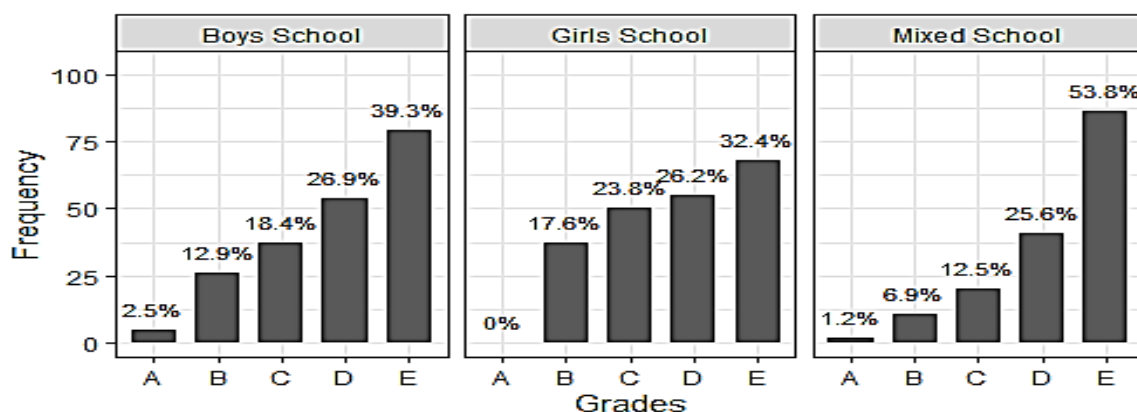
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### 4.3 Comparison of students' scores before and after the use of audio-visual as a learning technique.

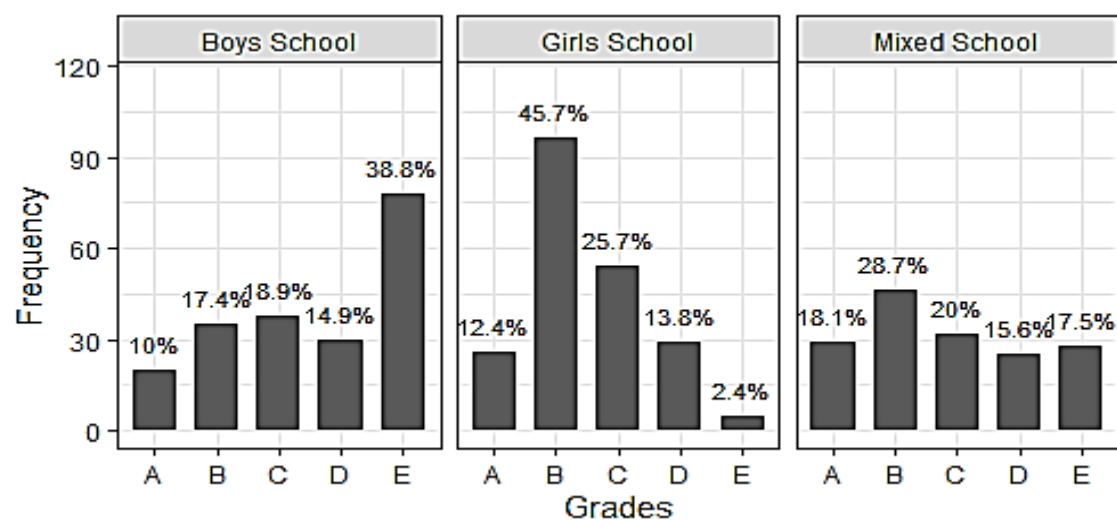
The students in the experimental group in this study were exposed to Audio-visual as a teaching technique, while the students in the control group were taught using the conventional method of teaching. The students both in experimental and control group were then given a test to test the efficiency of the Audio-visual against the conventional ways of teaching. The tests scores for the students before the Audio-visual were compared to the tests scored after watching an Audio-visual as shown in figure 2 below.

Figure 1: Test scores result for the pre-Audio-visual for the experimental group in the three types of schools



The distribution and frequency of the tests scores after the Audio-visual were administered. It is clear that the scores after the Audio-visual shows a great shift from the right to the left, the frequency of lower grades that is C, D, E has tremendously decreased and an increase in the A and B grades. We can also see that for girls' school there was no student who scored an A before the Audio-visual but after the Audio-visual the frequency of A's was increased by 12.4%. A great shift is seen in girls' schools, with a great drop of those who attained grade E from 32.4% before the videos to 2.4% of those who watched the videos. After the Audio-visual also we see that the majority of students in girls' school scored grade B and C as compared with pre-Audio-visual results where majority of the students scored grade D and E. The students in boys' school had a slight improvement of the overall grades. There was a slight reduction in the frequency of those who scored grade E, from 39.2% to 38.8%. The frequency of students getting grade A also increased slightly from 2.5% to 10% as shown in figure 2 below.





**Figure 2** Test scores result for the post Audio-visual for the experimental group for the three types of schools

There was observed great improvement of learners in mixed schools after the Audio-visual with the highest reduction in the frequency of those getting grade E from 53.8% to 17.5%. The number of learners getting an A also had a huge increase from 1.2% to 18.1%. Generally, the distribution of grades for the three schools before the Audio-visual was negatively skewed, meaning more learners were performing poorly. After the Audio-visual the data distribution behaved almost normally distributed, meaning most learners performed averagely unlike Otieno & Mwangi (2020). Upon the introduction of the Audio-visual, it was observed that there was a significant improvement in the test scores and grades of the students in both the control and experimental group as supported by Barasa (2019). This suggests that the use of Audio-visual in teaching Kiswahili oral skills can be an effective tool in enhancing students' understanding and proficiency in the language.

The experimental group showed a greater improvement in their test scores and grades compared to the control group. This further supports the idea that visual aids, such as videos, can be a valuable addition to traditional teaching methods in language learning. The independent sample t test was used to test the hypothesis that there are no significant differences between the performance of students taught using Audio-visual and those taught using the conventional methods as presented in Table 3.

### 4.3.3 Test scores result for the pre and post video for the experimental group for the three types of schools: bar plot of mean scores of Girls and Boys

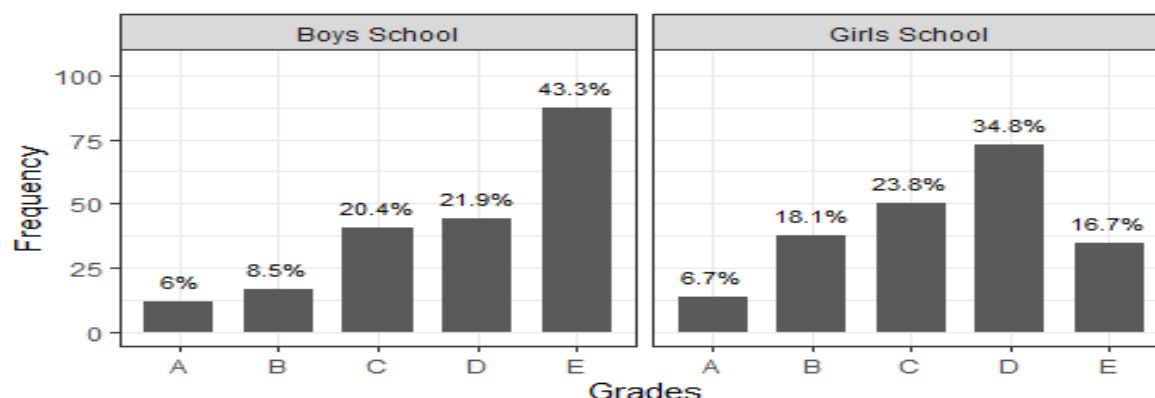


Figure 3: Mean scores of Girls and Boys

Figure 3 shows the distribution of grades for boys and girls. It is clear that the girls had a smaller percentage of Es 16.7% as compared to the boys as they had a higher percentage of Es (43.3%).

## 4.4 Hypothesis testing

4.4.1 There is no statistical significance difference between the Kiswahili performance of students taught using Audio-visual and those taught using conventional technique in public secondary schools in Kenya.

Table 3 Means score of the tests

	Degree of freedom	t-value	p-value	Confidence interval
welch t test for the experimental group	1138.5	-13.013	< 2.2e-1616	-9.32,-5.56
welch t test for the control group	1126.9	-8.0255	0.0567	-14.98,-10.5

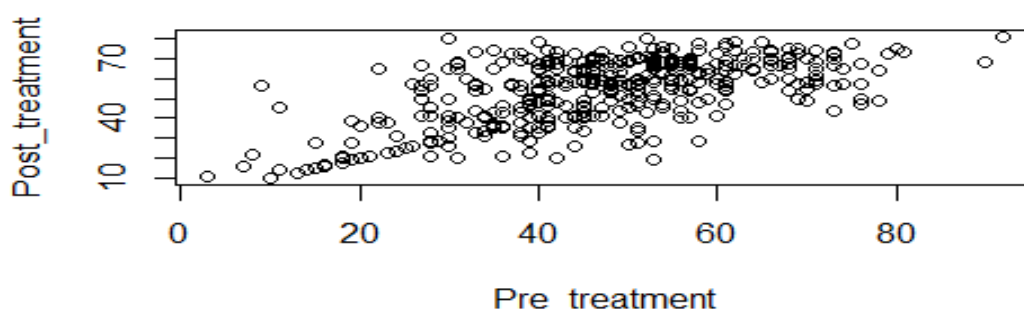
The mean score in Control group was 41.7 (SD = 15.8), whereas the mean in Experimental group was 54.1 (SD = 16.3). A Welch two-sample t-test results in table 3 shows that the observed difference was statistically significant,  $t(1138.5) = -13.013$ ,  $p < 2.2e-1616$ . Therefore, the results of the first independent t test for Kiswahili scores indicated that indeed there is a significance difference between the mean of those students who used the conventional means and those students who used the videos. We therefore reject the null hypothesis that there is no significant difference between the mean of those students who used the conventional method and those students who used the videos and conclude that there is a significant difference between the mean of those students who used the conventional means and those students who used the Audio-visual (Creswell & Creswell, 2023).

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Further analysis of the study's results revealed that the use of Audio-visual as a teaching method had a significant impact on students' scores in Kiswahili. The experimental group, who were exposed to the videos, showed a higher mean score of 54.1 compared to the control group's mean score of 41.7. This difference was found to be statistically significant with a p-value of less than 0.05. The results of the Welch two-sample t-test further confirmed the significance of the observed difference between the two groups. This finding indicates that the use of Audio-visual as a teaching tool can greatly improve students' performance in Kiswahili compared to the conventional teaching method. This study's findings are consistent with previous research that has shown the effectiveness of multimedia tools in enhancing learning outcomes. The use of Audio-visual can provide a more engaging and interactive learning experience for students, leading to better retention and understanding of the material.



**Figure 4** The scatter plot of pre and post treatments

Figure 4 shows a linear relationship between pre-treatment scores and post treatment scores. The correlation test (Spearman) to test the strength and direction of the relationship. The results of the test showed a computed Spearman's rank correlation  $\rho = 0.5521$ , with a p-value  $< 2.2e-16$ . Since the p-value is less than 0.05 this indicates a significant correlation between the pre-treatment scores and post treatment scores of students who were taught using Audio-visual. In other words, the individual students' scores before watching the Audio-visual were closely related to their scores after watching the Audio-visual.

Based on these findings, we can reject the hypothesis that there is no significant difference between the Kiswahili performance of male students taught using Audio-visual and their female counterparts. This supports the conclusion that there is indeed a significant difference between the Kiswahili performance of male students and female students in public secondary schools in Kenya when Audio-visual is used as a teaching tool. This strongly brings up the new knowledge that:

**Empirical Validation of Audio-Visual Effectiveness in Kiswahili Oral Skills:** The study provides strong empirical evidence, specifically within the context of Kenyan secondary schools, that the utilization of audio-visual resources significantly improves students' performance in Kiswahili oral skills. This moves beyond anecdotal evidence or general pedagogical theories by providing statistically significant data that demonstrates a marked difference in learning outcomes compared to conventional teaching methods. The study quantified this improvement, showing a higher mean score for the experimental group using audio-visuals (54.1) compared to the control group (41.7).

**Gender-Specific Impact of Audio-Visual Aids in Kiswahili:** A crucial piece of new knowledge is the finding that female students performed significantly better than male students when taught Kiswahili oral skills using audio-visual aids. This uncovers a gender-based disparity in the effectiveness of this specific pedagogical approach (females mean score 60.8 vs. males mean score 46.2), which can inform more targeted and equitable educational strategies.

**Contextual Application and Confirmation of Mayer's Cognitive Theory of Multimedia Learning:** The study applies and, in effect, confirms the applicability of Richard Mayer's Cognitive Theory of Multimedia Learning within the specific educational and linguistic context of Kiswahili oral skills in Kenya (Wanjiru, 2021 Chepkemai & Kessio, 2025). It provides evidence that the principles of dual-channel processing (visual and auditory) leading to deeper learning hold true in this real-world classroom setting, supporting the theory's generalizability and offering insights into its practical implications for language education as asserted by Barasa (2019).

**Quantification of the Baseline Challenge and Improvement:** By conducting pre-tests and post-tests, the thesis precisely quantified the initial low ability of students in Kiswahili oral skills like high percentage of students getting grade E before intervention and subsequently demonstrated the extent of improvement achieved through the integration of audio-visual resources (Simiyu, 2022; Otieno & Mwangi, 2020). This provides concrete data on the magnitude of the problem and the potential solution.

## **5.0 Conclusions and recommendations**

The study reveals that after the students in the experimental group exposed to Audio-visual it was clear that the scores show a great shift from the right to the left, the frequency of lower grades that is C, D, E has tremendously decreased and an increase in the A and B grades. It was also unblemished for girl's school where there was no student who scored an A before the videos but after the Audio-visual the frequency of as was increased. A great shift was seen in girls' schools, with a great drop of those who attained grade E before the videos. After the videos also we saw that the majority of students in girls' school scored grade B and C as compared with pre videos results where majority of the students scored grade D and E.

The students in boys' school had a slight improvement of the overall grades; there was a slight reduction in the frequency of those who scored grade E. The frequency of students getting grade A also increased slightly. There was observed great improvement of learners in mixed schools after the videos with the highest reduction in the frequency of those getting grade E. The number of learners getting an A also had a huge increase. Generally, the distribution of grades for the three schools before the videos was negatively skewed, meaning more learners were performing poorly. After the videos the data distribution behaved almost normally distributed, meaning most learners performed averagely which leads to the rejection of the Null hypothesis that there is no significant difference between the mean of those who used the conventional method and those students who used the Audio-visual and conclude that there is a significant difference between the mean of those students who used the conventional method and those students who used the video, this was in line

with what Richard Mayer's cognitive theory of multimedia learning that the brain takes in information and processes it in multiple channels, based on how that information is presented.

In essence, the thesis offers specific, localized, and statistically supported evidence for the effectiveness of audio-visual resources in a critical area of Kiswahili education, highlighting particular nuances like gender differences, thereby adding valuable, actionable insights to the field of educational technology and language pedagogy.

## 5.1 Recommendations

Curriculum planners should encourage the utilization of audio-visual materials in teaching and learning processes by ensuring their inclusion in the Kiswahili curriculum at all levels.

Teachers should emphasize the visual aspects of teaching media, such as videos, to improve students' oral ability and must be selective and creative in designing media to enhance Kiswahili teaching and learning.

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