



# A comparative Use of Traditional and Multimedia Modes of Teaching Curriculum Studies in English

Patrick Mthethwa

Department of Curriculum and Teaching, University of Eswatini, Eswatini

Email: [pmthethwa@uniswa.sz](mailto:pmthethwa@uniswa.sz)

Received: 07/11/2021

Accepted: 27/05/2022

Published: 28/05/2022

**Abstract:** This study explored students' preferences on the use of traditional and multimedia modes of course delivery at the University of Eswatini. Since the advent of technology, the use of traditional and multimedia modes of teaching has received attention in research. Students' preferences regarding either being taught traditionally or technologically are areas that have been investigated intensively, yielding different conclusions. This study was a cross-sectional survey. For data collection, the study used a five-point anchored Likert-scale. Forty-three (43) participants participated in the study. They completed a questionnaire that sought their preferences on the mode of teaching between two courses, CTE 319/519 and CTE320/520. CTE319/519 was taught using multimedia, and CTE 320/520 was taught using the traditional mode. Data were analyzed using the SPSS, mainly descriptive statistics to establish the trends in the students' preferences. The mean, frequencies, modes, and standard deviation were the major domains for data interpretation. The results revealed that the students preferred the use of multimedia over the traditional mode of course delivery. However, when the data were further analyzed using the age-range, the older generation performed better than the younger generation in their preferences on the use of multimedia when teaching. Overall, the results have implications for integrating multimedia technology when teaching curriculum courses.

**Keywords:** Multimedia, technology, curriculum, comparative, integration

## 1. Introduction

The integration of ICTs, especially multimedia in education have changed the traditional teaching methods tremendously. Since the advent of technology, schools and tertiary institutions became innovative and knowledge sharing platforms, adopting explosive, reflexive, pragmatic, and experiential approaches, which placed the individual learner at the center of learning (UNESCO, 2014). Advancements in technology across the world have propelled the education sector in the last few decades to focus on the best ways of using technology to deliver content materials in education (Okoro & Ekpo, 2016). Students, as recipients of the classroom technology, have been at the center of focus in most enquiries. Research into teaching and learning using new technologies is presently a very dynamic and relevant area of educational systems (Ghavifekr & Rosdy, 2015; Eickelmann & Vennemann (2017). A number of educational institutions have embarked on the call for the integration of technology with teaching and learning to improve content delivery.

In the last decades, the teaching and learning processes using technological applications have become a necessity. The shift from traditional to modern ways of teaching using technology is enlightening in terms of both content delivery and technology. It is therefore important to note that the development of technology continuously advocates for major changes in the teaching and learning environment. Although technology does not replace existing conventional methods, its emergence

enhances the process of teaching and learning. To this end, educational institutions have principal responsibilities to mitigate the demands orchestrated by the ever-growing need to integrate technology with teaching (Oluwatayo, 2012). Educational institutions, therefore, do not only have the obligation to transform traditional ways of teaching, but also to emphasize the use of technology in its daily business, while it also supports efforts geared towards expanding their technological oriented programs. This is necessary for any educational institution, lest it becomes obsolete.

The availability of vast information on the internet fundamentally transforms the teacher's role in the classroom from being an authority, or the primary font of knowledge to being a facilitator and guide, responsible for advising and directing students to appropriate sources of knowledge systems. Students, on the other hand, have to understand that learning involves three phases; the construction of declarative knowledge (knowing that), the construction of procedural knowledge (knowing how) and the construction of structural knowledge (knowing why) (Andresen & Van den Brink, 2013). These basic types of knowledge domains are realized much more succinctly now that technology has advanced the course of teaching and learning. In this current dispensation of knowledge systems, students have to find their individual access to the myriad information available on the internet, while teachers guide them on appropriate acquisition items. Thus, students need to adopt effective individualized learning strategies, supporting their critical thinking skills. Currently, the use of different media for teaching is not only indispensable but also an epitome of multimodal approach to teaching and learning strategies. As a result, in the teaching and learning processes teachers have adopted the use of different multimedia tools to support teaching and learning.

### **1.1 Use of technology at Eswatini**

The use of technology, in particular multimedia, at Eswatini institutions of higher learning has been prevalent for quite some time now. However, because of inadequate infrastructure, it is minimally used compared to developed countries. Schools and tertiary institutions adopted the use of technology to advance the course of education at Eswatini. The outbreak of the Corona virus pandemic further exacerbated the use of technology, such that most face-to-face courses were transformed to be online courses, and many institutions of higher learning at Eswatini adopted blended learning.

### **1.2 Curriculum studies in English I**

Curriculum studies in English I (CTE319/519) is a first semester course; it focuses on teaching of English language at senior secondary schools. This is a preparatory course introducing students to the basic theories, assumptions, and principles of language teaching in English as second language (ESL) contexts. The thrust for this course rests on reviewing current trends, guiding principles, metaphors, and methodologies, including the integration of technology in ESL teaching and learning contexts. It chooses language educational websites identified for their educational strength, relevancy, and diversity of content in ESL contexts. All these aspects provide a hallmark for the course. As a result, the course strives to link students (using online resources) with language teaching and learning experiences, surfacing from countries where English is spoken either as first or second language. The course reflects on best practice principles, appropriate modeling of language competencies in speaking, reading, listening, and writing. The course further embraces to the application of language research methods and strategies.

---

### **1.3 Teaching of CTE319/519**

As noted, CTE319/519 is taken by students whose career is teaching English at senior secondary schools. It is a full semester three-hour credit course. During the teaching of the course, students are expected to master the governing assumptions of ESL pedagogy, and their implications for language teaching and learning. They are also expected to identify English language varieties and their implications for teaching and learning of English in ESL contexts. Furthermore, students have to examine the vehicular role of English, and its importance in the national development strategy (NDS), including but not limited to HIV and Aids, gender, poverty, environmental awareness, and the role of teachers of English across the curriculum. Students are also expected to adopt rigorous strategies for improving teaching and learning of the four language skills; mainly, speaking, writing, listening, and reading. In addition, students are also expected to identify and evaluate English language educational websites designed for augmenting teaching and learning experiences.

CTE319/519 is a face-to-face course that uses multimedia. That is, most of the content information is presented in the form of PowerPoint slides with hyperlinked videos, pictures, text, and graphics. Since internet is often weak at some places at the university, the course instructor downloads the videos prior to teaching. During class, the videos and other materials are hyperlinked to the PowerPoint slides such that the PowerPoint slides carry all the appropriate media chosen for the lesson. In class, for instance, students would watch Noam Chomsky explaining the concept of Universal Grammar (UG), Language Acquisition Devise (LAD) and many other linguistic concepts. Hyperlinked images are also very helpful in this course. For instance, pictures showing the brain image are used when teaching brain modules responsible for language processing and production.

### **1.4 Curriculum studies in English II**

Curriculum studies in English II (CTE320/520) is a second semester course that introduces students to the basic principles, assumptions, and theories of teaching literature at senior secondary schools. The course is anchored on the general assumptions of teaching literature for both vicarious and aesthetic purposes, leading to the awareness of accepted moral life values to students. Different literary genres such as prose, drama, short story, and poetry are studied, not for their sake but for their contextual relevance and appropriateness in advancing the objectives for which literature in English is taught at senior secondary schools. The thrust for this course is in reviewing current trends and guiding principles in the teaching of literature in English. Literary websites identified for their educational strength, relevancy, and appropriate methodologies are identified and used to buttress the course.

### **1.5 Teaching of CTE320/520**

As noted, CTE320/520 is a second semester course taken by students whose career is teaching at senior secondary schools. The course is about the teaching of literature. It is a full semester three-hour credit course. During the teaching of the course, students are exposed to vicarious and aesthetic reasons for teaching literature in English at senior secondary schools. The course exposes students to the literary genres, principles, and metaphors of teaching literature. Furthermore, the course promotes awareness of the link between teaching English language and literature in English. In addition, students are conscientized about the literature syllabus and the role of a literature teacher. The course also prepares students to select contextually relevant literary texts appropriate for teaching at senior secondary schools.

The course is also face-to-face but does not use multimedia like CTE319/519. However, students are still referred to relevant websites for additional readings. In this course, students are organized into

groups; each group is assigned a topic to work on, and then present it to the class. The groups work on the following topics; teaching of literature, justifying the study of literature in schools, organizing units in literature, methods for developing units in literature, teaching of the short story, teaching of the novel, teaching of poetry, and teaching of drama. Students work on the topics in class and continue during their free times. At the end of the semester, students present their assigned topics to the rest of the students.

## **2. Review of Related Literature**

### **2.1. Multimedia**

According to Thamarana (2017) multimedia is an integration of many types of media on a single medium in the same information unit. Earlier scholars, Sethi (2005) and Mayer (2002) note that multimedia is an integration of two or more different information media within a computer system. They further argue that these media can include text, images, audio, video, and animation. Recent scholars (Vaughan, 2011; Andresen & Van den Brink, 2013) expand that multimedia is a combination of digitally manipulated text, photographs, graphic art, sound, animation, and video elements. From these definitions, it is apparent that multimedia is a conglomerate of usable technology applications and programs meant to ease classroom practice. As noted, it is a combination of texts, graphics, sounds, animation and videos delivered electronically.

Eswari (2018) expands that multimedia is a multi-sensory delivery mode that stimulates multiple senses of audiences at a time. It appeals to many senses of learning. Its interactive nature enables teachers to control the flow of information. Furthermore, Elviana, Inderawati, and Mirizon (2020) add that multimedia technology affects both aspects of teaching and learning in three ways; it accounts for how information is presented; how students interact with the presented information; and how knowledge is structured and conceptualized easily. In terms of components, Mayer and Moreno (2000) contend that multimedia learning systems consist of animation and narration which improve students' understanding.

The use of multimedia in teaching is becoming the most common way of teaching. While multimedia is advanced in other countries, it is still growing steadily in others, despite being marred by infrastructural challenges (Mthethwa & Munyoka 2021). When teachers choose multimedia, they select the media according to the characteristics of their teaching aims and objectives (Weidenmann, 2002; Hoffler & Leutner, 2007 & Ilhan & Oruc, 2016). According to these scholars, teaching using multimedia breaks the traditional teacher-centered approach and allows students to access vast information that reinforces their learning experiences.

Most studies associated with the integration of technology in teaching (Mthethwa, 2018; Mthethwa & Munyoka, 2021) use the Extended Unified Theory of Acceptance and Use of Technologies (UTAUT2), with particular attention to the diffusion of innovations, including acceptance. The diffusion of innovations tends to accommodate quite a wide range of technologies in the classroom and have wider implications for Africa, since the use of technology is still growing, and has a greater bearing on the acquisition of knowledge. The UTAUT2 theory befits the current study because of its strength in explaining diffusion of innovations (Venkatesh, Morris, Davis & Davis, 2003). In Africa, there is still need to advance the course of learning using technology. This theory is appreciated against the backdrop of an Afrocentric perspective, particularly because it explores the use of multimedia in teaching courses which were previously taught traditionally.

---

## 2.2. Multimedia tools

Multimedia is composed of various tools: text, graphics, animation, sound, video, and PowerPoint. These components contribute differently to the learning process.

### *Text*

It is a fundamental element in all multimedia applications. It conveys most information (Vanghan, 2004). We can use ordinary text or various typographic effects for emphasis or clarification in language teaching. In order to catch the reader's attention, teachers use different font size, color, and style to present information and emphasize a certain word or phrase. Color is one of the features a teacher uses to brighten a lesson.

### *Graphics*

It refers to images and pictures such as charts, diagrams, and photographs, which contain no movement. According to Wright (2003) graphics motivate, stimulate interest, improve understanding of a language, and offer reference to an object and topic. Graphics play a very important role in language teaching.

### *Animation*

Animation is the rapid display of a sequence of images of 2-D or 3-D artwork or model positions, creating an illusion of movement. It provides a simple image with detailed complex movements that appeal to the sense of sight, which resonates with the cognitive learning domain. Assisted by the use of animation, teachers animate key knowledge points that intrigues students' motivation (Vanghan, 2004).

### *Sound*

It is speech, music, or any other sound stored and produced by computers. It has more advantages than a tape recorder. In multimedia, teachers use more vivid and meaningful sound to augment students' learning (Zhen, 2016). Sound is auditory and has to appeal to the sense of hearing. Lessons accompanied by acoustic tend to stimulate learning.

### *Video*

It is the visible part of a television transmission that broadcasts visual images, stationary or moving objects. Compared with animation, video offers more vivid information; however, it consumes more storage space than animation (Vanghan, 2004). It also consumes more data especially when streamed live.

### *PowerPoint*

PowerPoint is a presentation program created by Robert Gaskins and Dennis Austin at Forethought, Inc Software Company. PowerPoint allows the presentation of text, graphics, animation, sounds, and videos. Hyperlinks are used to connect all the media components into one unit of a presentation document.

To improve teaching and learning, teachers include any of the multimedia tools to enhance the quality of lessons. Depending on the structure of the lesson, the teacher may choose the most effective tools. While there are many benefits of using multimedia in teaching, it would be difficult for students

to understand the conglomerate use of the tools without the presence of the teacher. Most often, the teacher has to introduce the selected media and explain its relevance to the lesson.

### **2.3 Traditional teaching**

Before the use of multimedia in teaching, traditional ways of teaching were predominant. The major traditional teaching mode is face-to-face. It is time and place bound; that is, there has to be a venue and meeting time. Traditional teaching is the most direct method of teaching, where the teacher meets students physically. In this method, teachers do not only control the classroom setting but also assist students when they encounter problems of knowledge acquisition. Teachers often use a flexible teaching schedule and adjust the content according to the requirements of the teaching arrangement, which is not only appropriate for cultivation of the basic learning needs, but also informing students' self-study skills. Teachers' actions and language become the target imitated by students, whose outlook towards right and wrong, attitude, value orientation, and academic level have great impact on students. The physical classrooms become meeting centers for both teachers and students. In this approach, the teacher supervises the entire teaching and learning processes, allowing the students to attain systemic knowledge (Schwerdt & Wuppermann, 2011).

Even though the traditional method does not focus on indoctrination, it enforces students' academic opinions, together with educational philosophy, the effects of which is the development of knowledge acquisition. The teacher with special training from a college or university understands the transcending educational practices and content knowledge and provide the balance between content and methods of teaching to attain success. One major drawback for this approach is accessing the myriad information outside the classroom, pruning, and arranging it by students. Students rely greatly on the teacher's articulate content delivery and his/her acute selection of meaningful materials and delivery methods. Therefore, the teacher's absence in the classroom is detrimental to knowledge acquisition because of his/her expected role. Books are authoritative, and their absence also restricts the acquisition of knowledge; thus, learning is crippled.

Several studies (Çakir, 2006; Kausar, 2013; Cuning, 2001 and Daniel, 2013) have surfaced, trying to explain the effects of using multimedia in teaching English as a whole or its component. In these studies, much attention has been directed to the benefits of using multimedia in the teaching of English. For instance, Yunus et al. (2013) undertook a study, focusing on visual aids in teaching literature in English. The results showed positive teachers attitude towards using visual aids in teaching literature in English. Therefore, the study supports the use of visual aids in teaching literature. The choice of which media to use largely depends on the teacher and the lesson structure. A teacher may opt to use graphics while another may opt to use animation. For instance, Fatehi (2013) explored the role of enhanced video subtitles in teaching grammar classes. The study used experimental methods, and a questionnaire to measure students' perceptions towards using subtitled videos in teaching grammar was used for data collection. The study revealed that using subtitled videos yield positive results when teaching grammar. Therefore, it emphasized the importance of using subtitled videos to attain higher achievement in the teaching of grammar.

Vast literature provides evidence that the use of multimedia tools benefits students. Some studies have noted that just by watching videos in a multimedia presentation, students benefit from the lesson more than they would in traditional teaching. Cuning (2001) who explored the benefits of using multimedia in language teaching states that videos supply stimuli to the students; they get an opportunity to learn more about the subject. Also, he notes that the use of video in multimedia helps the students to attain the target language efficiently. Secules, Herron, and Tomasello (1992) found that videos offer language learners opportunities to see the dynamics of communication. Using various appropriate images in the classrooms to illustrate a concept makes the class pleasant and enjoyable. It is argued that videos also make students more thoughtful and engaged in language learning. When videos are used to present a topic, it becomes revealing, interesting, and students conceptualize long lasting superior views about the topic.

The utilization of multimedia technology improves the attractiveness of the teaching and learning materials, including the lesson. Some authors have looked at the effect of using PowerPoint slides in enhancing teaching and learning activities. Ozaslan and Maden (2013) established that students learn better if resources are presented through the help of illustrations through PowerPoint because PowerPoint slides make the content more attractive, and this draws the attention of the students and creates curiosity. Ozaslam and Maden (2013) study can be viewed with that of Corbeil (2007) who, in his study, also concluded that PowerPoint slides intrigues learning through its vividness, liveness, clarity; it assists students to comprehend the content much better. The use of PowerPoint changes the structure of the lesson and continuously appeals to different learning senses. The PowerPoint application improves the attractive appearance of the lesson.

Discovering and widening student's knowledge about the culture of English is another advantage of multimedia. The adoption and use of multimedia in teaching offers students more possibilities than in the case of traditional teaching, where sources of knowledge acquisition are limited. Textbooks cannot compete with online authentic materials, accessed anytime anywhere. Students gain vast linguistic knowledge from online sources, including cultural backgrounds of target languages. In this way, they improve their language skills and also discover information sharing opportunities where they interact willingly, helping each other to acquire language more quickly and effectively (Pun, 2013).

While quite a number of studies have looked at the use of multimedia in schools for teaching English Language or Literature in English, there is scarcity of studies that have looked into the use of multimedia in teaching English courses at tertiary. A couple of studies such as Wezzema and Karema (2017) and Mthethwa (2018) have shared light on the effects of using multimedia for teaching in tertiary institutions. Wezzema and Karema (2017) investigated the use of audio-visuals in enhancing the teaching of English language. The study revealed that multimedia was beneficial in learning English, and it keeps students active. Mthethwa (2018) examined the use multimedia, animation in particular, in the teaching of vocabulary to U.S. international students. Again, the results were in favor of the use of animation. That is, the use of animation was effective when teaching vocabulary; it also accounted for high vocabulary retention levels.

Overall, most studies report positive outcomes on the use of multimedia in teaching English, whether it is grammar, vocabulary, or literature in English. However, not many similar studies have been conducted in Africa, especially in tertiary institutions; hence, the need for this study, which explored students' preferences on the use of traditional and multimedia modes of teaching curriculum studies in English.

### **3. Methodology**

#### **3.1. Design**

The study assumed a quantitative approach and used a survey research design to establish the trends in students' preferences for being taught using traditional or multimedia modes of course delivery. In particular, the study used a cross-sectional survey design; hence, data were collected at one point in time. Creswell (2012) notes that cross-sectional surveys are ideal for establishing "trends in attitudes and practices, community needs and program evaluation" (p.378). This study relates to the latter, since students' preferences regarding how they are taught could transform the program or the curriculum to align it with their preferences and performance.

#### **3.2. Procedure**

In the study participants were either enrolled for a Postgraduate Certificate in Education (PGCE) or Bachelor of Education (B.Ed) program. Even though the participants were enrolled in two different programs, they took the class jointly. During the first semester, students register for CTE319 (level 3 students), and CTE519 (PGCE) (level 5 students). The first semester course is Curriculum Studies in English I. As noted, this course is taught using multimedia. After completing the course at the end of

the semester, the same group of students proceed to semester II, where they all register for CTE320 and CTE520, respectively. The second semester course is Curriculum Studies in English II. This course is taught using the traditional mode.

It should be noted that the same lecturer teaches both courses. As stated earlier, the first semester course deals with methods and principles of teaching English language at senior secondary schools, while the second semester course deals with methods and principles of teaching literature in English at senior secondary schools. In addition, the assessment criteria for both courses are different. Perhaps, that is why the study could not assume a quasi-experimental design, but rather a cross-sectional survey design. Even though this is one group, taught twice, the course and assessment objectives for each course are different.

### 3.3. Research Questions

The study was guided by the following research questions:

1. Which course delivery mode between traditional and multimedia students prefer?
2. Which multimedia tools students think benefit them the most?
3. Do students' preferences differ by age range?

### 3.4. Participants

The final total sample for the study consisted of 43 participants who took both courses using the different modes of course delivery (semester 1 = multimedia and semester II = traditional). Convenient sampling was used in the study. In all, there were thirteen (13) males, constituting 30.2% and 30 females, constituting 69.8% of the sample. The group ages ranged between 20 and 49 years. Five (5) of the participants (11.6%) ranged between 20-24 years; 13 participants (30.2%) ranged between 25-29; another 13 participants (30.2%) ranged between 30-34 years; 11 participants (25.6%) ranged between 35-39 years ( $M=2.76$ ;  $SD = 1.04$ ). One participant (2.3%) ranged between 40-49 years ( $M=1.67$ ;  $SD=.464$ ). Regarding their programs, 19 participants (42.2%) were post graduate students doing Postgraduate Certificate in Education (P.G.C.E) and 24 participants (55.8%) were Bachelor of Education (B. Ed) students ( $M=1.56$ ;  $SD= .50$ ). In terms of work experience, 29 participants (67.4%) have worked between 0-4 years; 10 participants (23.3%) have worked between 5-9 years; 3 participants (7%) have worked between 10-14 years; 1 participant (2.3%) had worked between 15-20 years ( $M=1.44$ ;  $SD=.73$ ).

### 3.5. Instruments

The instrument used for data collection was a summative response five-point anchored rating scale, ranging from *agree* to *strongly agree*. Rating scales act as measurement instruments for non-physical properties but abstract, intangible, and complex cognitive processes related to different constructs of interest (Gamst, Meyers & Guarino, 2008). Responses to these individual but related items were more fundamental and declarative. That is, they were not interrogative. As noted earlier, the constructs on the instrument were rated on a five-point Likert scale, with higher values indicating more endorsement of the statement, while lower values indicated a low endorsement of the same. The primary goal for the rating scale was to gain insight into students' preferences about their experience in learning the curriculum courses using different modes of course delivery.

### 3.6. Validity and reliability

Before the instrument was administered to the participants, a validity test was conducted. Cronbach's alpha was used as a measure of internal consistency on the set of items in the instrument. A reliability coefficient of 0.723 was established. According to Nunnally (1994) an internal reliability

coefficient of 0.7 and above is acceptable for conducting research. Students who participated in the testing of the instrument were not part of the final study.

### 3.7. Data collection

At the end of the academic year, the course lecturer administered a cross-sectional survey questionnaire to the participants. While the participants were told of their right not to participate in the study, it was however explained to them that the study aims at establishing better ways of teaching these courses. Therefore, it was important to give feedback on how the modes of course delivery have impacted their learning experiences. In total, forty- three (43) questionnaires were distributed to the participants, and the retrieval rate was 100%, which means all the participants completed and returned the questionnaire. Participants were given ten minutes to complete ten items in the questionnaire, including the demographic data. Table 1 shows the main items in the questionnaire, excluding the demographic data. For each item, the rated scales were; *strongly disagree, disagree, neutral, agree and strong agree*.

**Table 1.** Rated Items

No.	Items
1.	I benefit from the use of technology in class
2.	I understood CTE319/519 better than CTE320/520 because of the use PowerPoint
3.	I understood CTE319/519 better than CTE320/520 because of the use of pictures
4.	I understood CTE319/519 better than CTE320/520 because of the use of videos
5.	I understood CTE319/519 better than CTE320/520 because of the use of animation
6.	I mastered content in CTE319/519 better than CTE320/520

## 4. Findings and Discussion

Data for this study were analyzed using quantitative methods, mainly descriptive statistics, which was used to establish trends in the form of frequencies, means, modes, and standard deviations among the variables. Because research question two was determined by the findings for research one, data were analyzed sequentially. The findings for all the research questions are presented in the order of the research questions.

### 4.1. Research Question 1

The purpose for this research question was to explore students' preferences of either being taught using traditional or multimedia mode. The results are presented below. Please note that Table 2 is similar to Table 1 except that in Table 2 the items are abridged to create space for the other headings.

**Table 2:** Multimedia tool ratings

No.	Items	Mean	Std Dev. (SD)	Total
1.	Use of technology in class	4.27	.627	43
2.	Use of PowerPoint	3.72	.959	43
3.	Use of pictures	3.74	.812	43
4.	Use of videos	3.88	1.00	43
5.	Use of animation	3.53	.935	43
6.	Mastery of content	3.34	1.11	43

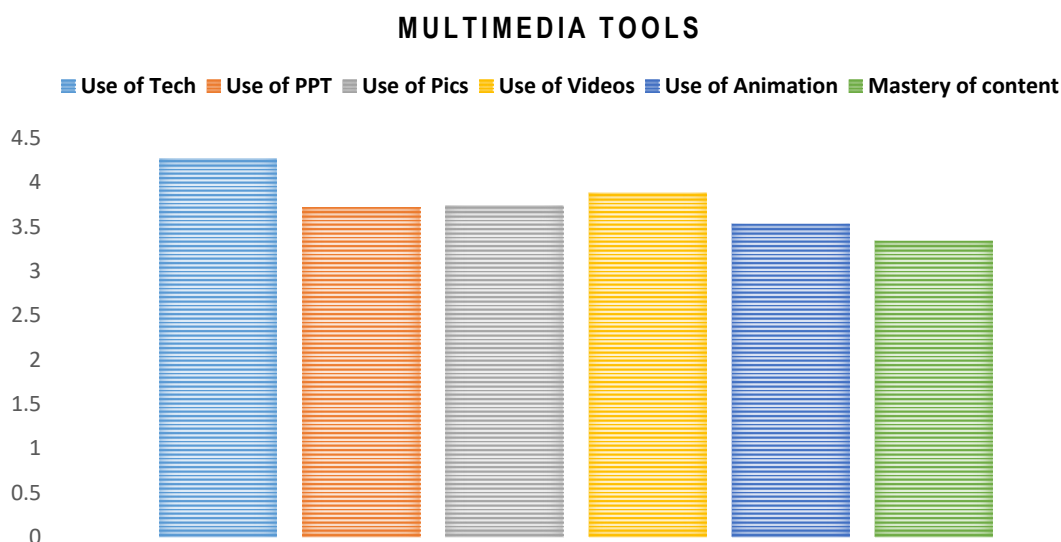
Mean > 2.5 = Negative rating of items: Mean < 2.5 = Positive rating of items

From Table 2, it is observed that the students rated the use of multimedia higher than the use of traditional mode of teaching, since all the *Means* are greater than 2.5. As noted earlier, the cross-sectional survey questionnaire associated higher values with more endorsement of the statement and lower values with low endorsement. From the analysis, it can be observed that in all the items on the instrument, students preferred multimedia as the appropriate mode of delivery of the course content. That is, the participants endorsed the use of multimedia more than they did for the traditional mode.

As noted in previous studies such as Cuning (2001), Ozaslan & Maden (2013) and Mthethwa (2018) students lean towards the use of technology in the classrooms - a deprivation of which is minimal learning and participation. In this study, the results for research question 1 indicate that the students rated multimedia as a useful tool for learning. This finding is in line with findings from other studies that have viewed the use of multimedia in teaching positively. All these studies are in unison that multimedia has a positive effect on students' learning experiences.

#### 4.2. Research Question 2

This research question examined the type of multimedia tool students thought benefitted them the most. Below are the findings. From Figure 2, it can be observed that students benefitted the most from Videos ( $M=3.88$ ;  $SD=1.00$ ), Pictures ( $M=3.74$ ;  $SD=.812$ ); PowerPoint ( $M= 3.72$ ;  $SD=.959$ ) and Animation ( $M=3.53$ ;  $SD=.935$ ).



**Figure 2:** Multimedia tools rating

Findings for research question 2 indicate that while all the students benefitted from using multimedia, they however did not benefit equally from the multimedia tools. As seen in Figure 2, most students benefitted the most from using Videos, Pictures, PowerPoint, and Animation, respectively. Apart from ranking the types of media that students thought benefitted them the most, one notes that the students rated the benefit of using *technology* higher ( $M=4.27$ ;  $SD=.627$ ). This indicates a very positive rating supporting the use of technology in class. However, it is worrying to note that while they have a positive rating for using technology in class, their degree of mastery of content received through using technology ( $M= 3.34$ ;  $SD= 1.11$ ) is rated far lower than all the other variables. These findings depict an incongruence. One would have expected that if students rated technology higher, they should also reflect a high level of mastery of the content delivered through that technology. However, it did not happen in this study, and the discrepancy is quite glaring. Be that, as it may, it is

noted that the students' tendency to benefit from the use of videos is observed even in other studies such as Secules, Herron, and Tomasello (1992); Çakir (2006) and Chen & Xia (2012). There is consistency in that students prefer lessons with embedded videos, and this finding is supported by both old and new studies; this is captured by the sequence of the listed studies above.

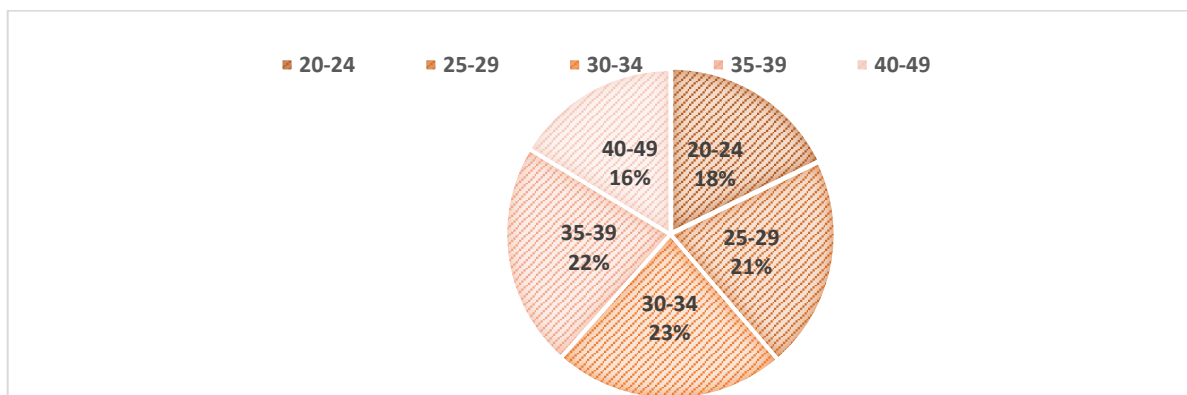
### 4.3. Research Question 3

The third research question sought to establish if students' preferences differed by age range. The results are presented below. For this research question, each participant's scores were averaged to yield a single *mean* score. This translated to forty-three (43) individualized *mean* scores which were then subjected to analysis.

**Table 3:** Participants Age Range

Age Range.	Mean.	Std Dev.	No.
20-24	3.09	1.02	5
25-29	3.64	.406	13
30-34	3.79	.677	13
35-39	3.84	.406	11
40-49	2.83	-	1
			<b>43</b>

Table 3 shows the following age range statistics; 20-24 ( $M=3.09$ ,  $SD=1.02$ ); 25-29 ( $M=3.64$ ,  $SD=.406$ ); 30-34 ( $M=3.79$ ,  $SD=.677$ ) 35-39 ( $M=3.84$ ,  $SD=.406$ ) 40-49 ( $M=2.88$ ).



**Figure 3:** Preference by age range.

The findings for research question 3 depict that there was variation on the students' preferences by age. It was further observed that the student's preferences were increasing by each age range, except for one student whose age was between 40-49 years. What is concerning again in these findings is that the older generation (25-29 years; 30-34 years; 35-39 years) view multimedia more positively than the younger generation whose ages range between 20-24 years. One would have expected the younger generation as they are called "*techno-smart generation*" to outperform the older generation; however, in this study, the reverse was true.

In summary, this study revealed that the students preferred to be taught using multimedia than using the traditional way of teaching. It also revealed that students' preferences vary on each type of media

tool used, such as video, text, graphics, pictures, animation, and PowerPoint. Some media tools were more preferred than others. Therefore, it cannot be assumed that every media is equally preferred by students in teaching. It is therefore important for the teacher or course instructor to determine the appropriate multimedia tools that would impact learning. Assuming that every media tool impacts learning the same way is folly.

## 5. Conclusion

The study provides strong evidence that using multimedia when teaching is one of the best practices in teaching and learning. Despite that students do not prefer every type of multimedia tool equally, they still largely benefit from its use. Therefore, teachers should strive to integrate multimedia technologies when teaching, and further determine the most appropriate media to use. On the flipside, conducting the study using a sequential mixed method design would have been ideal. This design would have allowed qualitative follow-up questions that would deal with the unanswered questions. For instance, it is not clear why students would rate *the use of technology for teaching* higher, and rate *mastery of content* taught through the preferred mode lower. Also, why in research question 3, the younger generation is outperformed by the older generation. Overall, this study has implications for both practice and future research.

## References

- Andresen B. & Van den Brink K (2013). *Multimedia in Education*, UNESCO, Denmark.
- Çakir, D. I. (2006). The use of video as an audio-visual material in foreign language teaching classroom. *The Turkish Online Journal of Educational Technology*, 5(4), 67- 72. Retrieved from <http://www.tojet.net/articles/v5i4/549.pdf>
- Corbeil, G. (2007). Can PowerPoint presentations effectively replace textbooks and blackboards for teaching grammar? Do students find them an effective learning tool? *CALICO Journal*, 631-656. Retrieved from <https://www.jstor.org/stable/24147981?seq=1>
- Cunning-Wilson, C. (2001). Practical aspects of using video in the foreign language classroom. *The Internet TESOL Journal*, 6 (11). Retrieved from <http://www.tojet.net/articles/v3i3/339.pdf>
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluation quantitative and qualitative Research*, Pearson, Boston.
- Daniel, J. (2013). Audio-visual aids in teaching of English. *International Journal of Innovative Research in Science, Engineering and Technology*, 2(8), 3811-3814.
- Elviana, R., Inderawati, R., & Mirizon, S. (2020). Developing interactive multimedia for teaching descriptive texts based on Palembang local culture. *Indonesian EFL Journal*, 6(1), 19-26.
- Eickelmann, B., & Vennemann, M. (2017). Teachers 'attitudes and beliefs regarding ICT in teaching and learning in European countries. *European Educational Research Journal*, 16(6), 733-761.
- Eswari, N. (2018). Effectiveness of teaching Mathematics. *Asian Journal of Multidimensional Research (AJMR)*, 7(2), 678-681. Retrieved from <https://www.indianjournals.com/ijor.aspx?target=ijor:ajmr&volume=7&issue=2&article=105>
- Fatehi, M., (2013) "The Effectiveness of Using Subtitled Video to Teach Grammar" Graduate Theses and Dissertations. <http://lib.dr.iastate.edu/etd/13057>
- Gamst, G., Meyers, L. S., & Guarino, A. J. (2008). *Analysis of variance designs: A conceptual and computational approach with SPSS and SAS*. Cambridge University Press.

- Ghavifekr, S., & Rosdy, W. A. W. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education and Science*, 1(2), 175-191.
- Hoffler, T. N. & Leutner, D. (2007). Instructional animation versus static pictures: a meta-analysis. *Learning and Instruction*, 17(6), 722-738.
- Ilhan, G. O. & Oruc, S. (2016). Effect of the use of Multimedia on students' performance: A case study of social studies class. *Educational Research and Reviews*, 11(8), 877-877.
- Kausar, G. (2013). Students' Perspective of the Use of Audio Visual Aids in Pakistan. *International Proceedings of Economics Development and Research*, 68(3), 11-13.
- Mayer, R. E. (2002). Cognitive theory and the design of multimedia instruction: an example of the two-way street between cognition and instruction. *New directions for teaching and learning*, 2002(89), 55-71. <https://doi.org/10.1002/tl.47>
- Mthethwa, P. (2018). Teaching vocabulary using multimedia: the case of U.S. international students. *Global Journal of Foreign Language Teaching* 8 (2), 68-75.
- Mthethwa, P. & Munyoka, W. (2021) *Sociology Foundations of Education in Africa, Perspectives, Contexts and Contemporary Issues* (Eds. Ruhhare T & Gwirayi, P), Oxford University Press, South Africa.
- Nunnally, J. (1994). *Psychometric theory*. New York: McGraw-Hill.
- Ozaslan, E. N., & Maden, Z. (2013). The use of PowerPoint presentation in the department of foreign language education at Middle East technical university. *Middle Eastern & African Journal of Educational Research*, 2(12), 60-75.
- Oluwatayo, I. B. (2012). Mobile Phones as Mobile Banks and Credit Outlets: The Experiences of Farming Households in Rural Southwest Nigeria. *International Journal of Computing and ICT Research*, 6(1), 52-59.
- Pun, M. (2013). The use of multimedia technology in English language teaching: A global perspective. Crossing the border: *International Journal of Interdisciplinary Studies*, 1(1), 29-38.
- Schwerdt, G., & Wuppermann, A. C. (2011). Is traditional teaching really all that bad? A within-student between-subject approach. *Economics of Education Review*, 30(2), 365-379.
- Okoro, C. O., & Ekpo, E. E. (2016). Effects of Information and Communication Technology (ICT) application on academic achievement of students in Christian religious studies in Cross River State. *International Journal of Interdisciplinary Research Method*, 3(2), 14-24.
- Secules, T., Herron, C., & Tomasello, M. (1992). The effect of video context on foreign language learning. *The Modern Language Journal*, 76(4), 480-490.
- Sethi, A. (2005). *Multimedia Education: Theory and Practice*. Mittal Publications.
- Thamarana, S. (2017). Teachers' attitude towards the use of ICTs in English language teaching: A survey. *The Criterion: An International Journal in English*, 6(1), 701-725.
- UNESCO, (2014). *UNESCO Education Strategy 2014-2021*. 75352 Paris 07 SP, France.
- Vaughan, T. (2011). Multimedia: Making It Work. *Diambil kembali dari: https://cs.columbusstate.edu/curriculum/syllabi\_archive/syllabi\_2012/spring\_2012/CPSC3105\_whitehead.doc*.
- Vaughan, N. (2004). Technology in support of faculty learning communities. *New Directions for Teaching and Learning*, 2004(97), 101-109.

- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.
- Weidenmann, B. (2002). *Multicodierung und Multimodalität im Lernprozess*. In J. I. Issing & P. Klimsa (Eds.), *Information und Lernen mit Multimedia and Internet* (pp. 45–62). Weinheim, Germany: Beltz.
- Wright, A. (2003). *Picture for language learning*. Tianjin: Nan Kai University Publishing House.
- Yunus, M. M., Salehi, H., & John, D. S. A. (2013). Using visual aids as a motivational tool in enhancing students interest in reading literary texts. *Recent Advances in Educational Technologies* (1), 114-117
- Wezzema F, & Karema F, (2017). Implications of multimedia audio-visual in the English language classroom, *Proceedings of the 7<sup>th</sup> International symposium, SEUSL*.
- Zhang, Y., Chen, X., Li, J., Wang, C., & Xia, C. (2015). Semantic object segmentation via detection in weakly labeled video. *In Proceedings of the IEEE conference on computer vision and pattern recognition*.
- Zhen z. (2016). The use of multimedia in English teaching. *US-China Foreign Language*, 4(3),182-189.