INTEGRATING HYPERMEDIA IN TEACHING OF SOCIAL STUDIES AND ITS EFFECT ON PERFORMANCE AMONG PUPILS IN PUBLIC PRIMARY SCHOOLS IN MAKUENI COUNTY, KENYA

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DECLARATION

I confirm that this thesis is my original work and has not been presented in any other university. This research thesis has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words), graphics, pictures and tables have been borrowed from other sources, including the internet , they are specifically accredited and referenced using current APA style and in accordance with anti-plagiarism regulations.

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Supervisors

We confirm that the work reported in this thesis was carried out under our supervision as University supervisors.

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DEDICATION

I dedicated this work first to my wife Priscah Maneno for her unwavering support during the entire process and secondly to my brothers Simon Kyalo and Jonathan Mutunga for continuous material, financial, morale support and all the encouragements since I was a primary school kid.

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First, I thank the almighty God for granting me good health, strength and focus to complete this thesis. Secondly, I appreciate the efforts of my supervisors Dr. Moses Githua Kariuki and Dr. Mueni Kiio for professional guidance, commitment to read and continuous monitoring my progress until the completion of this research report.

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LIST OF ACRONYMS AND ABBREVIATIONS

DEO - District Education Officer

DVD - Digital Versatile Disk or Digital Video Disk

KCPE - Kenya Certificate of Primary Education

KNEC - Kenya National Examinations Council

ICT - Information and Communication Technology

NACOSTI - National Council for Science, Technology and Innovation

PEOU - Perceived Ease of Use

PU - Perceived Usefulness

ABSTRACT

Hypermedia has been embedded in the education sector. It helps in content delivery, make learning interesting and help pupils to concretise abstract content. Most studies done on hypermedia integration in learning have targeted secondary schools and higher levels of education. The study was inspired by the fact that academic performance in Social Studies at global stage is not well done. The aim of the study was to establish the effects of integrating hypermedia in teaching of Social Studies among primary school pupils and the effect on academic performance. The specific objectives of the study were: to establish whether hypermedia influence performance; to investigate factors influencing teachers to integrate hypermedia in teaching of Social Studies; to find out the level of integration of hypermedia in teaching of Social Studies; and to investigate challenges (if any) experienced on integrating hypermedia in teaching. The findings were used to show the effect of integrating hypermedia in teaching among primary school pupils and hopefully help government and educational institutions on how to improve provision of online content. Two theories guided this study; Constructivism theory by Vygostky and Technology Acceptance Model by Davis. The study used quasi experimental research design. The target population was two thousand four hundred and seventy-eight class seven pupils, one hundred and sixty four teachers of Social Studies in eighty three diverse primary schools in Kibwezi Sub County. The study adopted purposive sampling to pick four schools in the experimental group and four other schools in control group. Forty five pupils from each school were randomly sampled. The sample size was three hundred and sixty pupils. Thirty two teachers were also purposively sampled. Questionnaires, Pre and post-tests, observation checklist and face to face interview were used as the research instruments. Pilot study was conducted in two schools outside Kibwezi Sub-County that were not part of the study. Pearson product moment correlation coefficient was used to calculate the correlation coefficient of both cases to assist in establishing the degree to which the contents of the questionnaire were consistent in getting similar responses every other time the instrument was given. A coefficient of 0.5 was considered sufficient to establish the reliability of the instrument. Data got from factors that influence teachers to integrate hypermedia in teaching, level of integration of hypermedia in teaching and challenges encountered when integrating hypermedia in teaching were analyzed using thematic approach. Data on effect of integrating hypermedia in teaching on performance was analyzed using t tests. Charts, figures and tables were used to present findings. The findings showed majority of the respondents agreed that hypermedia was useful in teaching. On the level of integration, most of the respondents used the technology sometimes and rarely implying the possibility of time table schedule challenges. Data got on the influence that hypermedia has on performance implied that use of hypermedia was effective and pupils enjoyed interacting with the technology. The teachers while integrating hypermedia in teaching experienced challenges of; inadequate time to use, little or no support technologically, heavy workload, low levels of interest, inability to use desktops and incompatibility with assessments. Based on the findings it is recommended that there should be a policy of school computer rooms and training of teachers to enhance their computer literacy for them to be able to possibly apply hypermedia in teaching.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Primary school education is important for individual's development. It enables one to develop various skills and knowledge from early age essentially to fit in the world of today. Primary school education is referred to as basic education in most nations. This initial education enables an individual to graduate to higher education levels in pursuit of knowledge and skills. In order for pupils to achieve these desires, it seems critical for them to clearly and consistently grasp content and skills at every grade level. This is likely to be achieved through continuous improvement of teaching methods.

Social Studies is a major subject taught in formal education systems across the world. It equips pupils with fundamental concepts of culture, economics and political skills to make them productive citizens. Social Studies helps pupils to understand how the world works on a social level and understanding the many facets of society. This makes Social Studies essential for all grade levels of pupils from elementary through college. It is therefore of great importance for every person to have an understanding of various factors that have led to the current rule-based world order.

At the global stage, Social Studies performance is not done well in the west. In Brown Centre Report, Hansen, Levesque, Valant, and Quintero (2018) assert that the performance of Social Studies in the US was not good. The report shows that American students having a wide and persistent gap in knowledge of civics. 'The size of these gaps is disconcerting' the report states. The report further suggests that policymakers and practitioners need to monitor the performance to come up with ways to provide a high quality Social Studies education to students across USA.

In African countries like in Namibia, a study done by Carl and Negumbo (2017), sought to look into poor performance in Social Studies in Grades five to seven in primary schools. The study sought to investigate factors behind pupils' underperformance in Social Studies. To mitigate the challenge it proposed the need to empower teachers to implement curriculum effectively. In Nigeria, Social Studies has not been recording impressive scores either. Ekpo and Chuku (2017) did a study on classroom climate and students' academic achievement in Social Studies in Cross River State. The study looked into how classroom climate and its relationship with academic achievement among students of Social Studies. The research recommended that teachers of Social Studies should be re-trained on how to have an encouraging classroom climate for students. Angbing (2014), did a study on 'do Social Studies teachers' variables influence students' performance in senior high school Socials Studies in Ghana? Evidence from students' performance test in Social Studies led to the recommendation that Social Studies teachers' variables should be considered for the teaching of the subject.

In Kenya, the problem of poor performance in Social Studies among primary school pupils is evident. According to KNEC KCPE annual reports, Social Studies performance in Kibwezi Sub-County is lower than National performance. The comparison of Kibwezi Sub-County performance to National performances was as shown in Table 1.1.

Table 1.1 : Comparison of Social Studies Mean Scores of Kibwezi Sub-County to National Mean Score

Year	National Mean Score	Kibwezi Sub-County
2015	50.07	49.98
2016	57.38	51.92
2017	57.21	49.67
2018	50.28	49.31
2018	50.33	47.82
2018	50.71	47.04
2019	50.33	47.82
2020	50.71	47.84

(Source; KCPE KNEC REPORTS 2015-2020)

Table 1.1 above shows the comparison of National Social Studies mean score to Kibwezi Sub-county from 2015 to 2020. The mean scores for Social Studies in Kibwezi Sub-County was lower than the national mean scores for all years. This implies that pupils have been performing poorly in Social Studies as compared to national performance, hence need for an immediate intervention.

The persistent underperformance of Social Studies has made researchers over the world to investigate if teaching using modern technologies can improve performance of Social Studies particularly in Kenya and around the world. Hypermedia is one of the technology based teaching being adopted to improve performance in sciences and Mathematics (Amin, Haris & Swandi, 2019).

Teaching using Hypermedia has been identified as one of the most effective and efficient Experimental Learning Model. According to Experimental Learning Model theorist; Pupils learn best when they feel, watch, think and do (Sombra del Rio, Sanz and Bucari, 2019). Sombra et al argue that integrating Hypermedia in teaching enables pupils to use various senses to enhance learning. This method of learning

caters for all categories of pupils. Few studies have been done on the effect of hypermedia integration in teaching of Social studies among Primary school pupils. One study was done by Obondo Gaudence et al. (2017). The study focused on the adoption of hypermedia in pedagogy of hearing impaired students in Kenya targeting students in high schools. The study targeted high school students with special needs and the findings of the study cannot be used to generalize conclusions for primary school pupils. Sombra et al (2019) did a study on the effect of hypermedia educational software in teaching of mathematics. This study targeted first year university students. This study focused on college students who are mature, and so it is difficult its findings to be generalized for Primary school pupils and more on Social Studies which has been characterized by poor performance over the years.

Another study was done by Sáiz-Manzanares, Marticorena-Sánchez, Díez-Pastor and García-Osorio (2019), on whether the use of learning management systems with hypermedia mean improved student learning outcomes. The study was targeting university students of occupational therapy. It found out that learning management systems utilizing hypermedia improved student learning outcomes significantly. The study was done in Spain which has different cultural, social and economic settings from where this study was done. Based on this background information it was found necessary to conduct this research to ascertain if integration of hypermedia in teaching of Social Studies in primary schools can have any positive effect in pupils' performance.

Hypermedia is thought to be practical and cheap intervention in subjects like mathematics and Sciences. This is because at the click of a button an individual has access to texts, images, videos, audio and access feeds. This is different from using multimedia, which, one would be required to have several media for every lesson.

This may include colored books, televisions, DVD, stereo, overhead projector and diagrams mounted on classroom walls. It would be a great deal of mental effort and time to combine all these resources into a meaningful way (Koutsoupias & Papadimitrou, 1999). It is therefore more economical to have a computer and use hypermedia to save time, cost and mental effort and possibly achieve better results. In their research Koutsoupias and Papadimitrou (1999), found hypermedia to increase memory and recalling, enhanced comprehension, attention and improved motivation among early childhood pupils.

Hypermedia enables pupils to follow favorite link to acquire content. This is achieved by allowing pupils to have autonomy and have self-directed activities under the direction of the teacher. In a classroom setting, a teacher is able to limit largepresStuddsation to specific content but with various access feeds.. Research done by Obondo, Nabwire, and Too (2018), found that the use of hypermedia in teaching had a positive effect on motivation , retention , enjoyment , knowledge construction and self-directed learning, hence the study aims at adopting hypermedia teaching approach as an intervention for poor academic performance in Social studies among primary school pupils.

1.2 Statement of the Problem

Analysis of pupils' achievement in Social Studies in KCPE National levels showed persistent poor performance especially in Kibwezi Sub-County in Kenya. The underperformance was attributed to failure of teachers in embracing modern teaching approaches that promote effective and efficient learning such as adoption of hypermedia (Mubita & Mwanza, 2020)

Hypermedia has been shown to largely help in delivery of content when integrated in teaching and learning among secondary school learners. It provides effective and efficient learning environment as it improves and updates content knowledge. Hypermedia has been documented to promote meaningful learning through use of varying teaching and learning styles, enhance comprehension and higher order thinking as it improves positive attitude towards learning and consequently increasing students' performance in science subjects like Chemistry, Biology and Mathematics (Liu, 2012).

There exists enough evidence that shows integration of hypermedia in teaching has positively influenced academic performance in high schools and tertiary educational institutions leaving behind scanty information on if the persistence poor performance in Social Studies in Primary Schools can be addressed by adoption of hypermedia in teaching primary school pupils. This study therefore sought to establish if integration of hypermedia in teaching of Social Studies among primary school pupils in Kibwezi Sub-County can have positive effect on academic performance. This would go a long way to bridge the existing knowledge gap.

1.3 Purpose of the Study

The purpose of the study was to establish whether adoption of hypermedia in teaching of Social Studies among primary school pupils in Kibwezi Sub County in Kenya has any effect on academic performance.

1.4 Objectives of the Study

The study objectives were to:

i. Establish whether the integration of hypermedia in teaching of Social Studies influences Pupils' performance.

ii. Investigate factors influencing teachers to integrate hypermedia in teaching of Social Studies in Primary Schools.

iii. Find out the level of integration of hypermedia in teaching of Social Studies in Primary Schools.

iv. Investigate challenges experienced in integrating hypermedia in teaching of Social Studies in Primary Schools.

1.5 Research Hypotheses

The study was guided by the following research hypothesis:

H_{01}: There are no significant differences in performance between pupils taught using Hypermedia and those taught using conventional methods

1.6 Research Questions

i) What factors influence teachers' integration of hypermedia in teaching of Social Studies?

ii) To what level is hypermedia integrated in teaching of Social Studies?

iii) What challenges are experienced in integrating hypermedia in teaching of Social Studies?

1.7 Significance of the Study

The study was necessary because it could help the Education Ministry with an effective way of delivering teaching content to educational institutions. Through

hyperlinks the Ministry would be able to provide varied rich resources to these institutions that go a long way to help in learning. Further, it could be easier to monitor the progress and coverage of content with the help of various learning management platforms.

The study might help teachers on how to deliver content to pupils. It would save time, resources and mental energies that would otherwise be used in assembling many resources like television, radio, projector, realia and expensive experiments needed in teaching.

Moreover, the study might hopefully make it possible for pupils to enjoy learning and schooling in that the content delivered through hypermedia takes different forms and every learner should be able to use his/her favorite form of learning.

The study can help scholars, researchers and curriculum developers on support information regarding hypermedia integration in teaching.

The study was crucial to the government since it contributed to achievement of Information Communication Technology (ICT) literacy in the country as outlined in the National ICT Policy of 2006.

1.8 Assumptions of the Study

The researcher assumed first, that there is a difference between pupils taught using hypermedia technology and those taught using conventional teaching methods. Secondly, there are certain factors that influence teachers to integrate hypermedia in instructing pupils in Social Studies. Thirdly, Hypermedia is not fully integrated in teaching of Social Studies. Fourthly, certain challenges are experienced during integration of hypermedia in teaching of Social Studies. Finally, teachers of Social Studies would be honest and truthful in giving their responses.

1.9 Delimitations and Limitations of the Study

The study had the following delimitations and limitations.

1.9.1 Delimitations of the Study

The study was delimited to, Public Day primary Schools,Teachers of Social Studies and Standard seven pupils.

1.9.2 Limitations of the Study

The study was limited by some conditions beyond the ability of the researcher. Both teachers and pupils could have different levels of desire to participate in the research. The researcher encouraged teachers to cooperate. The research would involve tests and there was likelihood of evaluation anxiety.

1.10 Theoretical Framework

The study was guided by the theories of constructivism and Technology Acceptance Model by Davis 1989. Constructivism theory explains how learning occurs and how it can be enhanced as emphasized by Lev. S. Vygostky (1943). Technology Acceptance Model points out perceived usefulness and perceived ease of use as the reasons behind acceptability of an innovation by the end users. The selected theories explain the study outcomes and their specific parts. The researcher highlights each theory in reference to this study.

1.10.1 Constructivism Theory of Learning

Constructivism theory of learning describes learning as an active and constructive process in which the learner is an information constructor. It further states that people actively construct and create their own subjective representations of objective reality. Jean Piaget's explanation of cognitive development describes how

a child constructs a mental model of the world. He disagreed with the idea that intelligence was fixed and a trait and regarded cognitive development as a process which occurs due to natural maturation and interaction with the environment. That helped the study by establishing the influence of hypermedia integration had in teaching when pupils were exposed to hypermedia technology.

L.S Vygotsky thought that social learning preceded development. He believed that every function in a child's cultural development appears twice. First on the social level and later on the child's level. He also felt that learning happens between people and then inside the child. That for learning to occur, there has to be a person of a higher knowledge than the level of the learner with respect to a particular task, process or concept. This person of higher knowledge can be a teacher, coach, older adult and peers. According to him, humans use tools that develop from a culture such as speech and writing to mediate social environments.

Hypermedia integration is a crucial innovation in teaching. It has been said to be beneficial to both instructors and students. Very few teachers are believed to integrate hypermedia in teaching. Since hypermedia is extension of texts, images, graphics and videos, it provides pupils with a variety of learning experiences to cater for individual learning opportunities as per the tenets of constructivism theory. Teaching in which hypermedia has been integrated enhances self-discovery, allows the learner to interact with the environment and construct knowledge based on personal experiences as highlighted by this theory. It is the duty of the teacher to provide a favorable environment for the learner to acquire much knowledge as possible as per the zone of proximal development (Vygotsky).

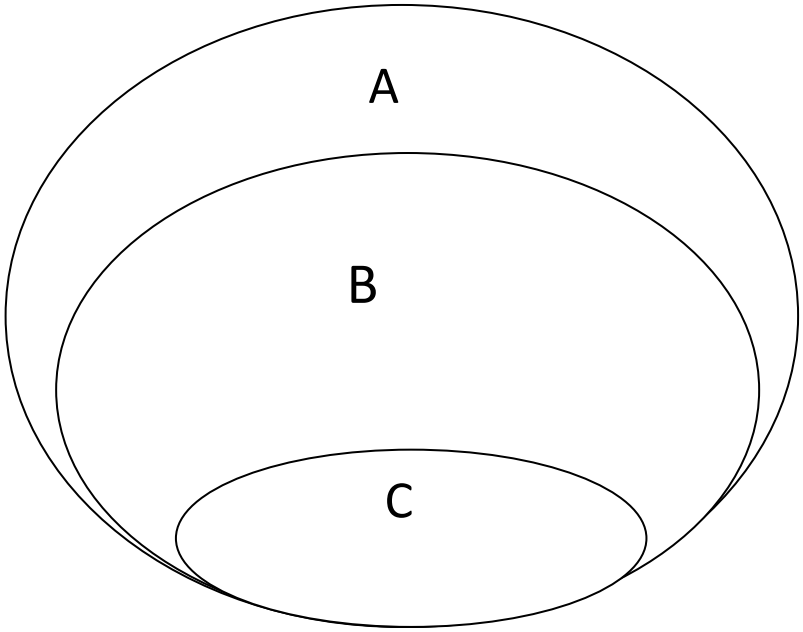

Figure1.1 : *Vygotsky model of constructivism theory, Olusegun 2015.*

KEY:

A: What the learner is developmentally unable to learn.

B: What the learner can learn with guided experimental help zone of proximal development.

C: What the learner already knows.

1.10.2 Technology Acceptance Model

This is an information system theory that models how users come to accept and use a technology. It was developed by Davis in 1989. He proposed that when users are availed with a new technology, two factors influence their decision on whether to use the new technology or not;

- Perceived Usefulness (PU): the extent to which a user believes that using a particular new technology system would enhance his/her job performance.

- Perceived ease of use (PEOU): the extent to which a user believes that using a particular new technology system would require less or no effort.

It postulates that the use of an information system is determined by the behavioral intention and that the behavioral intention is determined by the person's attitude towards the use of the system and by his/her perception of its utility.

Attitude is not the only factor but also the impact which it may have on his/her performance. It also hypothesizes a direct link between perceived usefulness and perceived ease of use. When a user is offered with two technology systems providing the same properties and abilities, the user will prefer the system that is easier to use (Dollin and Morris, 1996).

This theory guided the outcomes of the perceived ease of use and perceived abilities of hypermedia integration in teaching among teachers. That their prior experience probably with computers, computer anxiety, task structure and system quality affect their perceived ease of use and perceived abilities of hypermedia integration in teaching.

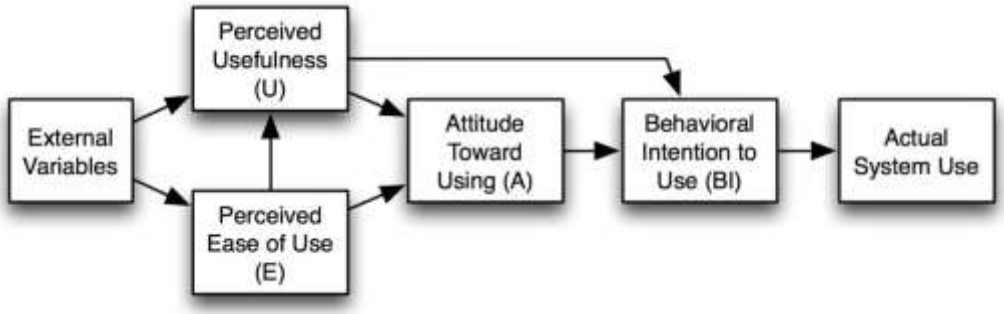

Figure: 1.2: *Technology Acceptance Model, Davis 1989.*

1.11 Conceptual Framework

The conceptual frame work shown below guided this study.

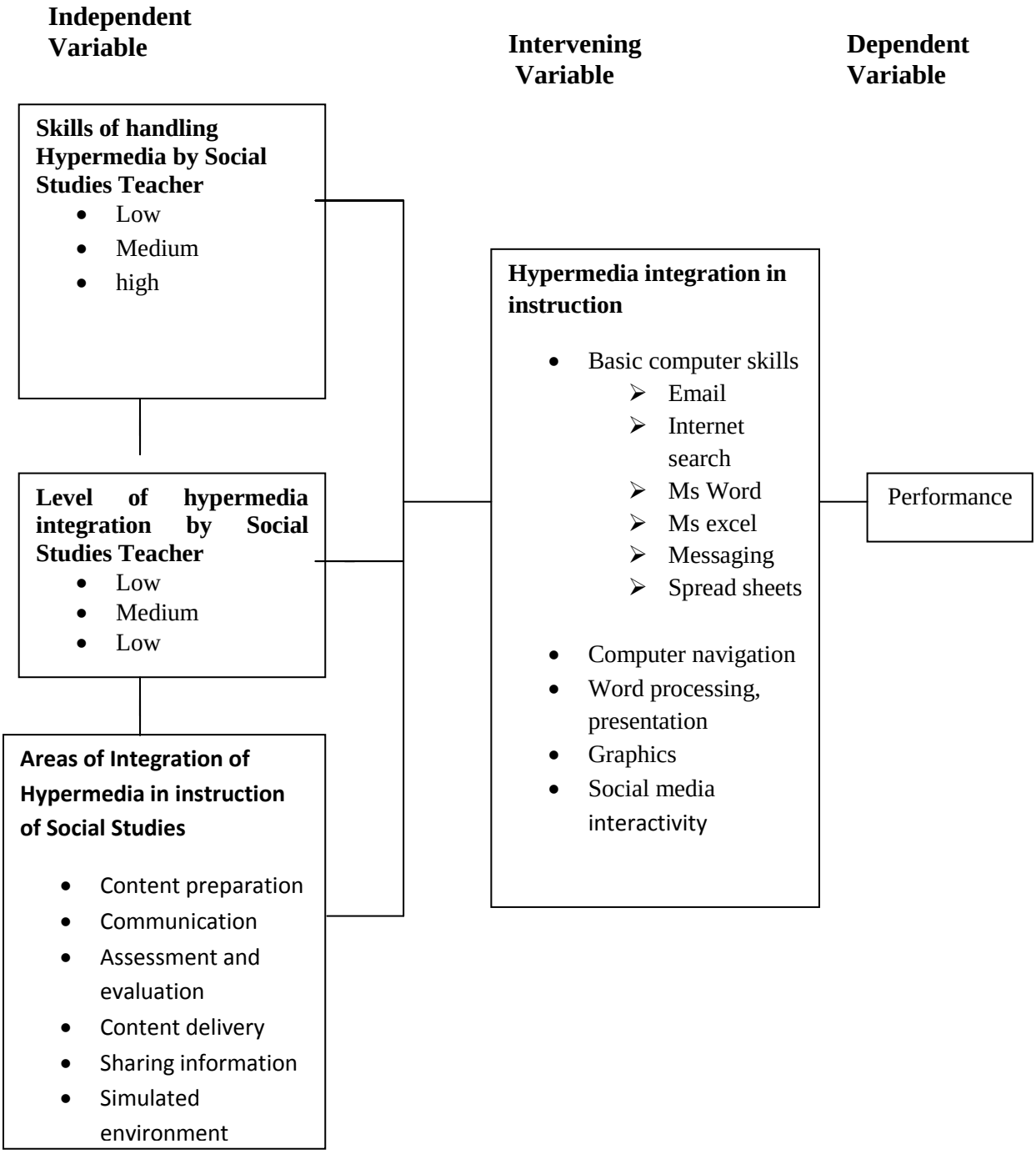

Figure: 1.3: *Conceptual Framework on Hypermedia Integration in Teaching*

Figure 1.3 above shows the independent, intervening and dependent variables of the study. The independent variables were; Abilities of integrating Hypermedia by teacher of Social Studies , Level of hypermedia integration by a teacher of Social Studies which were to be observed as Low, medium or high. The other independent variable was teaching areas of Integration of Hypermedia in instruction of Social Studies such as: Content preparation, Communication, Assessment and evaluation, Content delivery, Sharing information and simulated environment. These variables were perceived to gives the teacher of social studies the impetus and interest to enhance the integration of hypermedia in teaching. It is enhanced by peers, others' use, task structure and prior experience with computers. Hypermedia is useful in teaching as it helps in content preparation, content delivery communication, assessment and evaluation, sharing information and creation of simulated environment.

Ability of integrating hypermedia in teaching amongst teachers is also crucial. This ability may be influenced by the user's past experience with computers, knowledge in basic computer skills, computer navigation and social media interactivity. People with some knowledge on computer tend to embrace more to activities related to computers than those who lack that knowledge. Therefore, individuals with basic computer knowledge tend to have high ability of integrating hypermedia in teaching while those who lack basic computer knowledge will tend to have low abilities of integrating hypermedia in teaching. Level of use of hypermedia technology also has an effect. The level of use refers to the frequency the technology is being used. Low usage may imply that the effect may not be noticed while high usage can enable the effect to be felt.

Hypermedia integration is having knowledge of basic computer skills and applying them in teaching for purposes of improving learning outcomes. Basic computer skills are; use of the computer keyboard, ability to use Microsoft Word, Microsoft Excel, electronic mail, internet search, messaging and utilization of spread sheets. It also must include computer navigation, graphics, word processing and presentation and social media interactivity. These skills can help teachers to integrate hypermedia technology in teaching. The dependent variable of the study was performance of the pupils in Social Studies. Performance refers to academic achievement, increased motivation to learn, development of interest in school, enhanced critical and creative thinking among pupils, cooperative learning and awareness of contemporary issues in the world of social studies.

1.12 Operational Definition of Terms

a) **Effect -** A change which is a result or consequence of an action or other cause.

a) **Hypermedia** – is a non-linear medium of information that includes graphics, audio, video, plain text and hyperlinks.

b) **Integration -** is to form, coordinate, or blend into a functioning or unified whole.

c) **Perceived ability** – Someone's assessment of own abilities.

d) **Perceived usefulness** - the extent to which a user believes that using a particular system technology would enhance his/her job performance.

e) **Primary school** – also called elementary school. It is attended by children from about five to twelve years. It is typically after pre-school and provides formal education.

f) **Pupil** – A child who is taught in a formal school setting under close supervision of a teacher.

g) **Social Studies** - is the integrated study of multiple fields of humanities, including History, Geography, Civic and Political Science.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter focused on factors such as how hypermedia technology integration in teaching influences performance, factors that influence teachers to integrate hypermedia in teaching of Social Studies, level of use of hypermedia technology, challenges experienced when integrating hypermedia in teaching and a summary of existing gaps in the literature review. Hypermedia is part of computer technologies developed to enhance teaching and learning experiences in the world. Information Communication Technology (ICT) has been used to refer to some of these computer technologies. Very few studies have been done on integrating hypermedia in teaching, hence some studies done on integrating of ICT in teaching and learning have been considered for literature review. This is because the technologies use the same skills of communication, navigation, word processing, graphics , social media interactivity and general computer literacy.

2.2 Hypermedia Technology Integration in Teaching of Social Studies

Hus and Hegedis (2018) assert that Social Studies entails Geography, Sociology, History, politics, ecology among other fields in Slovenian fourth and fifth grades. These aspects are taught in this class with the use of didactic and experimental learning with hypermedia to create an environment that promotes and enables optimal learning. In this respect, the researchers sampled two hundred and ninety students from fourth grade and one hundred and seventy seven teachers in a research to examine the teaching strategies adopted by teachers when teaching Social Studies. They found that teachers rarely used didactic and hypermedia when teaching Social

Studies. Mostly, the teachers were found to use dictation and lecture approach to teach. These findings are supported by Kollar (2014) in a study conducted in Nigeria which found that the approach the teachers use in teaching Social Studies, more so among primary school pupils determined the students' performance.

Edinyang and Effiom (2017) investigated the teaching resources utilized in Social Studies in the 21st century. In the study, the researchers focus on the 21st century inventions that have changed the classroom activities like the projectors, e-book readers, online schooling, and hypermedia use. The researchers found that in teaching Social Studies, the teaching resources and approaches used are critical to the learning outcomes and student achievement.

However, as Mezieobi, Fabura and Mezieobi (2013) posits, teachers of Social Studies need exposure and orientation in order to meet the needs of Social Studies teaching. The current study offers an insightful approach to teaching Social Studies in the 21st century, but the study reviews few resources which limit the scope of the study.

Okoth (2015) used a descriptive research design to investigate readiness of teachers towards content integration in Social Studies teaching in Ndhiwa Sub County. The researcher randomly sampled twenty head teachers and eighty teachers and collected data using interviews and questionnaires. The findings found that teaching Social Studies in primary schools is faced with challenges including the inability to link topics, lack of teaching resources to aid in teaching and lack of professional development on use of technology to improve teaching and learning of Social Studies. These findings are collaborated by Shah (2016) who found that the current approaches in teaching of Social Studies lacked integration of innovative teaching and learning strategies. They found that teaching aids like multimedia and

others were not being used in the classrooms. These findings are crucial in understanding the status of teaching Social Studies in Kenyan classrooms.

The need for effective and efficient learning and teaching environment has led to the use of multimedia and hypermedia in the classroom. Studies have been conducted to determine the effects of hypermedia integration in teaching including studies by De Souza, Ritcher and Nel (2017); Gachinu (2014) and Ilhan (2016). They found that there has been an increased uptake of technology and media in the classroom which had enabled the pupils to conceptualise their knowledge and through the enriched delivery of subject content. Hashtorne (2015) found that hypermedia integration increased the content knowledge similar to Gaudence (2019) who found that hypermedia use for the hearing impaired teaching delivery led to positive changes in attitude towards a subject. Boadu et al (2014) found that teachers had a positive perception towards the usefulness of technology use in the classrooms asserting that pictures, audio visuals and other media helped them create a conducive learning environment that promoted learning. Wanjala (2016) also found that in mathematics, ICT integration was positively perceived by the teachers.

Mathayo Mafngila (2016) on teachers' experience on the use of ICT to facilitate teaching, a case of Ilala district secondary schools in Tanzania found out that teachers' attitude, competence in ICT and accessibility to ICT facilities determined the levels ICT utilization in class. The study employed descriptive research design in which seventy teachers were surveyed. This study targeted secondary school teachers. This study failed to explain the specific level of ICT integration. A study by Ghavifekr et al (2015) on teaching and learning with ICT tools; issues and challenges from teachers' perception that sought to determine challenges of using ICT tools in teaching and learning in the classroom among school teachers, found

that lack of ICT resources, time and technical support were the obstacles identified by teachers. This study targeted teachers of high school

Munyengade Sylvestene et al (2017) did a study on primary school teachers' perception on ICT integration for enhancing teaching and learning through implementation of one laptop per child programme in primary school in Rwanda. The study sought to identify challenges hindering one laptop per child programme. It found that teachers had positive attitude towards the programme. The challenges identified were that teachers lacked ICT skills and the schools lacked technological tools and adequate infrastructure. This research used quantitative method and therefore never sought opinion of the teachers on how some of these challenges could be handled. The same findings were realized when Alkahtari (2017) did study on the challenges facing Saudi secondary schools when integrating ICT in teaching. The study sought to identify challenges facing integration of ICT in teaching Saudi secondary schools. The study employed open headed questions and interviews. The review of literature revealed gaps on current studies on hypermedia integration especially in local primary schools. The majority of the studies focused on the integration of ICT and multimedia with limited ones focusing on hypermedia. Therefore there was a need for a research to be done on the effect of integrating hypermedia teaching approach on performance in Social studies among Primary school pupils.

2.3 Hypermedia Teaching and Academic Performance

Rapid changes in technology have influenced education as they do in every other aspect of human lives. As the number of technological advancements adopting the

education sector increase, more studies are needed to observe the effect these advancements have in education.

One of these technological advancements is hypermedia. Hypermedia is the usage of hypertexts, images, videos, graphics, audio and hyperlinks collaborated in way to generally have a multi-dimensional medium of information. Ilhan and Oruc (2016) purposed to investigate the effects of use of hypermedia technology on pupils' performance by conducting a case study on Social Studies classes. The researchers utilized an experimental design approach to study sixty seven Social Studies fourth graders. The students were divided into a control and experimental group from Kayseri in Turkey. The study found that using hypermedia in Social Studies classrooms increased the students' academic performance. Since the study was carried out in Turkey, there is need to study if hypermedia in teaching has a positive effect on primary school pupils in Kenya. In china a study by Yunkul and Er KO (2014) found that, using multimedia software, teachers reported that their students' attitude towards the subject was positive which led to improvement in academic performance. The study however, covered a wide scope as compared to this study which sought to focus on hypermedia, which ensures that the user is more engaged in its use as compared to multimedia where the pupils are passive.

Yamat, Ismail and Shah (2012) purposed to determine how developing hypermedia reading courseware for English affected students' performance. The research was done in Selangor, Malaysia. The researchers first conducted a needs analysis to identify the problems encountered by the teachers and students in teaching and learning English. They then used simple random sampling to target eighty students to evaluate how ICT integration in teaching affected the content delivery of English. The findings indicated that the developed courseware was suitable and applicable in

English classrooms. Further it was found that incorporating aspects of hypermedia like texts, graphic, audio and visual in courseware material made learning an interesting and meaningful process which enhanced comprehension of text. These findings are similar to those of Yara and Wanjohi (2013) who found that hypermedia integration in the classroom enhanced comprehension of content. Nevertheless, the findings are applicable to Mathematics while this study sought to find out the effects of integrating hypermedia in instructing Social Studies.

Pressure to provide pupils with efficient and effective learning environment and educational experiences has led to an increase uptake of hypermedia component use in classrooms. In this respect, De Souza, Ritcher and Nel (2017) undertook a quasi-experimental study to establish how exposing pupils to different hypermedia combinations affected the academic achievement of learning Social Sciences in South African learning institutions. The researchers found that use of hypermedia combinations enabled the use of varying teaching and learning styles which helped the pupils to construct their own knowledge through enriched approaches that promoted meaningful learning. These views are similar to those of Shah and Khan (2015) who asserted that the use of hypermedia in History and Geography made learning more meaningful thus enhancing the overall academic performance**.** The study, is however, compounded by its wide scope on the general use of hypermedia. The current study narrowed down its scope to examine how hypermedia integration in teaching influences Social Studies performance among primary school pupils.

Gachinu (2014) adopted an experimental research design to evaluate how integration of ICT influenced the performance of Mathematics. The study targeted two hundred and eighteen pupils randomly selected from schools that used ICT hypermedia components in schools from Embu North District. The study established that use of

ICT components in Mathematics pedagogy led to enhanced learner-centred approach and improved learner performance. The findings of the study correspond to those of Yara and Wanjohi (2013) who found that schools that use ICT technologies enhanced the overall performance of mathematics. They asserted that the use of hypermedia in teaching mathematics adequately endowed the pupils and prepared them for the national examination. However, despite the contribution of this study on hypermedia, its focus is on mathematics implying that the findings might not be replicable to Social Studies as a subject.

Acikalin and Duru (2015) investigated the influence of use of computer technologies in Social Studies classrooms. The researchers conducted a review of published works on how ICT influenced Social Studies classes. According to their review, the use of hypermedia components was found to enable students develop skills in retrieval of information. It also promoted understanding of the subject content and students' perspectives. In general it was found that through the internet, computer based technologies [hypermedia] influence the learning process by widening the scope of learning and their knowledge. Chandler (2013) found that the use of hypermedia like concept mapping, clustering, mind mapping and graphic organizers helped pupils to go deeper into ideas and concepts. Despite the study's contribution to the existing literature on the benefits of hypermedia, the study is a review of secondary sources which are prone to bias and lack a methodology section that can be replicated by other researchers.

Harshtorne (2015) investigated how integrating hypermedia into elementary science professional development workshops influenced Science content knowledge of the participants. The researcher utilized an experimental approach to the study and found that one benefit of the implementation of hypermedia is improved content knowledge.

These findings are echoed by Davies and West (2014) who found that the use of hypermedia in the classroom facilitated learning by closing the performance gap and increasing pupils' performance. Further, they found that the use of hypermedia increased pupils' motivation and enhanced better communication amongst the teacher and the pupils. However, the study is confounded by its focus on elementary science, yet this study is concerned with teaching of Social Studies among pupils of primary schools in Kenya.

Gerkets and Kirschner (2013) assert that hypermedia resources are an integral part of the primary resources of academic information for pupils. It is in line with this claim that they undertook a review to determine the educational benefits of learning with ICT technologies. The findings from their extensive review on literature revealed that hypermedia use in classrooms promoted positive attitude among the pupils which closed the performance gap while increasing classroom engagement. Similar views are expressed by Kollar and Fisher (2014) who found that the use of computer-supported collaborative learning was one key step towards bridging the performance gap and engaging pupils. However, the findings of these studies cannot be generalized in the teaching field. That is why this study sought to find out the effects of integrating hypermedia in teaching of Social Studies in the African context, Kenya in particular.

Sáiz - Manzanares etal (2019) investigated whether the use of learning management systems with hypermedia meant improved student learning outcomes among university students of occupational therapy in Spain. The study utilized quasi experimental with descriptive correlation design. It found out that the use of hypermedia with learning management systems increased the effectiveness of student learning, facilitated personalized learning and enhanced in depth and better quality

learning. This study was done in Spain which has different social and economic aspects as compared to Kenya. Further, the study targeted university students; hence there is a need for a study that targets primary school pupils. This study therefore sought to address this gap.

Sombra del Rio et al. (2018) sought to evaluate the effect of hypermedia educational material on teaching and learning of Mathematics among university students in Argentina. It was a case study and used Quanti-qualitative analysis. The study found that there was overall positive assessment on learning experiences. This study was done among university students of Mathematics in Argentina while the current study was done in Kenya which has different educational environment. Further, this study was done in Social Studies among primary school going children and sought to fill that gap.

Locally, Gaudence (2017) sought to investigate how the use of hypermedia in teaching Geography landforms affected the learning achievement of the hearing impaired pupils in mixed special secondary schools in Kenya. Anchored on the pragmatic research design, the researcher adopted a quasi-experiment approach targeting seventy nine students, ten teachers and four principals randomly selected. Data collected from the research through interviews, questionnaires and observation schedules revealed that hypermedia promoted learning and positive attitude towards learning on land forms. This resulted in higher learning achievement through improved teaching and delivery. These findings are contradicted by Chandler (2009) who found that the use of hypermedia in the classroom may lead to disorientation if the learner finds it difficult to grasp the learning material in the hypermedia learning system. Moreover, there is also the threat of cognitive overload that may arise if the content is not carefully managed. This study contributes to the local literature of

hypermedia use, but its focus is on pupils with hearing impairment, which limits generalizing the findings to the target population of this study.

2.4 Factors Influencing Integration of Hypermedia in Teaching of Social Studies

The factors that influence teachers to adopt a new technology in teaching are perception of ease of use and perception of usefulness of the technology.

2.4.1 Perception of Ease of Use by the Teacher of Social Studies

A research done by Makhoha and Mutisya (2016) found that teachers' perception of ICT highly influenced the decision to integrate ICT in teaching and learning environment. These perceptions are as a result of personal teacher beliefs on the result of such an adoption of a certain ICT programme or software (Sugar, Crawley& Fine, 2004). According to Yan (2008), insufficient teacher training in ICT use has been identified as the most serious setback to integration of technologies in teaching. Study done by Harrison & Rainer (1997) identified perception to play a significant role in determining ICT integration in teaching and learning. Teachers with high perceived abilities of ICT, integrated ICT in teaching while those with low perceived abilities do not use ICT in teaching and learning.

Littrell, Zagumny and Zagumny (2005) carried out a study on factors influencing teaching technology (ICT) use in classroom among Tennessee rural middle schools found out that pre-service teachers perceived abilities in ICT were significant in determining ICT use in teaching and learning. In Jordan, Al Bataineh (2014) did a study and found that upper primary and secondary school teachers' ICT competency determined integration of ICT in teaching and learning of Social Studies lesson. These studies show there was positive correlation between perception and integration of ICT courseware in teaching and learning.

These studies were done in USA and ASIA and targeted university and secondary school learners. The results of these studies cannot be generalized since Kenya has different technological advancement and furthermore the current study targets integration of hypermedia in teaching Sociamong primary school pupils.

Another study was done by Mulenga & Phiri, (2018), on teachers' ICT skills, beliefs and attitudes towards ICT integration in the teaching and learning of mathematics among secondary school teachers in Zambia. The study used survey method with descriptive survey design. Questionnaires were adopted as tools to gather data . Ninety two teachers of secondary school were involved in the study. The study found that the teachers had strong beliefs and attitudes towards the positive potential of ICT integration in teaching and learning. The teachers however had poor ICT skills. They reported this to the fact that they were not trained on how to integrate ICT in teaching. This study targeted high school teachers of mathematics while the current study focused on teachers of Social Studies in primary school. This study was to find out teachers' beliefs and attitudes towards integrating hypermedia in teaching of Social Studies.

Locally, different studies have been done on ICT integration in teaching and learning. Sulungai, Toili and Amadolo (2012) did a study on factors related to teachers behind the integration of information technologies in the teaching of mathematics in secondary schools in Kakamega Sub County. A total of one hundred and forty seven mathematics teachers participated. Data was collected with the help of questionnaires, interview schedules and check list. It was found that most of the teachers perceived their ICT abilities to be very low. The teachers did not have any technology training and did not use hypermedia in teaching of Mathematics. This

study was done targeting high school teachers of Mathematics while the current study targeted primary school teachers of Social Studies.

2.4.2 Perception of Usefulness of Integrating Hypermedia Technology in Teaching

Atsoglou and Jimoyiannis (2013) did a study on the perception of Greek teachers on the usefulness of Information Communication Technology use in classroom practice using the decomposed theory of planned behavioral approach. The researchers found that teachers perceive ICT use in the classroom as an important learning tool that enhanced pupils' understanding and comprehension on the subject content. It was further found that the teachers believed that ICT use, more so hypermedia had the potential to support classroom learning activities by stimulating hearing and visual stimuli. The findings are similar to those of Ibrahem (2012) who found that using multimedia software has a positive impact on students' academic achievement while enhancing the students' attention paying, respecting other's opinion and observing conversational etiquette. Overall, it was found that it enhances the student's life skills and interaction skills. However, the study was conducted in Greece which had different economic, social and technological approaches from Kenya. The study therefore sought to establish the role hypermedia teaching plays in enhancing teaching and learning Social Studies among primary school set up.

Cakir, Yukstelturk and Top E. (2015) undertook a study to examine the perceptions of teachers on educational technologies and its abilities in education. The researchers randomly selected five hundred and sixteen pre-service and three hundered and seventeen in-service ICT teachers in public primary schools and private ones in Turkey. A survey involving description was used to get data from respondents and it was found that, the perception of the in-service teachers on the abilities of ICT to

improve collective and cooperative learning processes was positive. It was found that the teachers perceived ICT as a tool that enabled sharing of resources and reflection on personal experience through constructivist learning environment. These findings were similar to Greenhow, Robelia and Hughes (2014) who found that teachers perceived ICT as important in helping them design their lessons and improve classroom environments. There was a dare need to find out how the perception on the importance of hypermedia in improving performance is influencing teachers of Social Studies among primary school pupils.

In South Korea, Pang, Reinkingand Ramey (2015) sought the perceptions of teachers on integrating hypermedia into literacy teaching. The study adopted a survey approach where one hundred and thirty seven teachers were randomly selected to participate in the study. The findings revealed that teachers perceived the integration of hypermedia and other components of ICT in the classroom as being a tool that encouraged collectivist approach to teaching and learning. They asserted that it brought pupils together to evaluate content which increased their comprehension of the subject content. However, these contributions of hypermedia integration are based on teaching literacy while this study its on teaching Social Studies.

Another study by Joo, Park and Lim (2018) used two hundred and ninety six respondents in their investigative study on the relationship between the teachers' perception of the abilities of technology in the classroom and their use among Korean teachers. The findings indicated that the use of technology allowed pupils to digest material rather than listen to the lectures while enabling the Pupils to have access to information both offline and online while actively participating in class discussions. These findings are echoed by Momanyi, Norby and Strand (2016) who found that the use of ICT features is beneficial due to its ability to enhance student-centred approach

which allowed for collaborative engagement with the teacher. However, Korea is a highly technologically advanced state different from Kenya which has a long way to go in adopting technology at the same level as Korean classroom; hence the findings were not replicable to the current study.

Ghavifekr and Rodsy (2015) investigated the effectiveness of using hypermedia to teach and learn in schools in Malaysia. The survey research study used simple random sampling technique to sample one hundred and one teachers from public secondary schools. From their investigations, the researchers found that integration of hypermedia in the classroom had a great effect and usefulness for both the students and the teachers. In regard to its usefulness for the teachers, the study found that it helped the teachers prepare for the lesson to facilitate teaching. The teachers also explained that using hypermedia helped to prepare an active learning environment that was effective and interesting for the students and the teachers. In regard to students, it was found that teachers perceived hypermedia use as being effective in engaging them by making the lessons interesting which fostered learning. The findings from the study contribute to the existing literature by highlighting some usefulness of hypermedia integration in teaching in Malaysian classrooms. Nevertheless, these findings are confounded by its general focus on the classroom as the current study focused on Social Studies.

In 2014, Boadu, Awuah, Ababio and Eduaquah did a descriptive survey research study on teachers' perception towards the importance of using computer technologies in teaching history. The perceptions of teachers towards the use of computers, projectors, audio-visuals and the internet were positive. They asserted that the use of videos and pictures helped the students with less reading skills and ability to grasp issues of the subject content. Hypermedia in the classrooms was also reported

to create an enabling atmosphere where the students developed the potential to make sense of what was being taught. These findings are supported by Miima (2013) who found that perceptions of teachers on the use of multimedia was positive with the teachers asserting that computer technology helped them meet the varying needs of the students and improved their understanding of subject matter. Nevertheless, the study was conducted in Ghana and the findings might not be replicable to the current context of study.

Locally, a study by Wanjala (2016) sought to estabish the extent of ICT-pedagogical teaching use in mathematics in secondary schools across the country. Questionnaires, interviews and observation schedules were used to collect data from two hundred Mathematics teachers selected randomly. The study findings found that there was a limited use of ICT technologies in teaching of mathematics due to the low confidence among the teachers who, despite having a positive perception towards the usefulness of the use of ICT, did not have the necessary professional knowlegde to utilize ICT pedagogy in mathematics teachings. Rose and Ferlund (2015) conducted a review on the use of technology in Social Studies' learning. In the study, it was found that the use of hypermedia in the classroom facilitated provision of a variety of teaching methods which offer opportunities for in-depth exploration of ideas and concepts in the classroom. Through the use of hypermedia, teachers can utilize maps, historical footages and excerpts from speakers, photographs and interviews which are powerful components of learning. Additionally, hypermedia offers a unique opportunity for the transformation of remote and abstract issues into something pupils can grasp through visual and print resources. Rose and Ferlund argues that, with all the positive effect Hypermedia teaching has, very few teachers are using it in class due to inadequate perception of its usefulness. The study therefore sought to establish

challenges influencing teachers' perception on importance of hypermedia in improving performance in Social studies among primary school pupils.

The findings are supported by Sprague (2014) who found that teachers perceived ICT components in teaching to be beneficial to the pupils' comprehension of content and problem-solving skills. However, this study was limited by its focus on secondary school teachers. The set up and education levels of secondary school may differ widely as compared to Primary school teachers who have a different demographic. This study which focused on primary schools set up where the previous findings may not be inadequately replicable.

2.4.3 Influence of Level of Integration of Hypermedia in Teaching

When innovations are developed, people adapt to them differently depending on a number of issues. Information Communication Technology like all other innovations had varied uptake levels by teachers. A research done by Ghavifeker Simin etal (2016) on ICT integration in educational incorporation and improvement in Malaysia, among primary school teachers, to identify level of integration of ICT in teaching found out that teachers used ICT for their work and not for teaching and learning. The teachers were normal users of ICT. The study used surveys and questionnaires to collect quantitative data from sixty one teachers of ten public schools. The study recommended that teachers should be well equipped to use ICT in classroom for teaching. It employed quantitative method that gave partial explanation as to why the teachers used ICT for their work and not for teaching. Another research done by Mathayo (2016) on teachers' experience on utilization of ICT to enhance teaching a case of Ilala district secondary schools in Tanzania found that teachers' attitude, competence in ICT and accessibility to ICT facilities determined the levels of its use. The study employed descriptive research design in

which seventy teachers were surveyed. This study targeted secondary school teachers. This study failed to explain the specific level of ICT integration. Further, a study by Marin-niaz Veronica etal (2020) on use of ICT tools by teachers in Chilean University. The study was done to determine use of ICT by university educators and found out that there was low use of digital resources by University lecturers. The study recommended training of lecturers on digital resources.

Another interesting study was done by Alkawaideh (2018) on barriers to utilizing ICT in Jordan for educational purposes. The study was done in well-equipped secondary school institutions. It found out that some teachers resisted the use of ICT. The study recommended that, there was need for sensitization on change of beliefs and practices pertaining ICT. The study was done in a country with different cultural and economic settings and therefore the conclusions cannot be directly applied in the area of current study. A similar recommendation was made by a study done by Said Assar (2019) on information and communication technology and education on effectiveness of e-learning. On the contrary, study done by Kumar and Ben Kei Danil (2016) on the integration of learning technologies into teaching within Fijian polytechnic institutions found out that teachers strongly valued contribution of learning technologies and were willing to embrace them. The teachers had good attitude towards ICT. The finding is also supported by a study done by Helm, F. (2019) that sought to explore behavior and attitudes towards tele-collaboration in higher education in Europe on language learning and technology. The study found lecturers to have positive attitude towards ICT. A further study done by Tabira, and Otieno, (2017) on integration and implementation of sustainable ICT-based education in developing countries, a case of low cost en masse methodology in Kenya. It concluded that teachers could lead in preparation of digital content.

Ghavifek, Thanusha Kunjappan, Logewany and Annreetha Antony (2015) on teaching and learning with ICT tools ; issues and challenges from teachers' perception, sought to determine to what extend do teachers use ICT tools in teaching and learning in classroom. The study found that there was an average use of ICT in teaching and learning in classrooms. These studies were done without involving experiments and therefore did not specifically identify the levels of ICT use by teachers. The above studies targeted secondary schools and university educators using survey research design. There are no findings on Primary school teachers; therefore the current study targeted primary school teachers' level of integration of Hypermedia in teaching Social studies as a remedy for poor academic performances. The study also employed quasi-experimental design to overcome the shortcomings which come as a result of survey design.

2.5 Challenges Teachers Experience Integrating Hypermedia Technology in Teaching

Challenges are obstacles and difficulties faced when performing a task. Many studies have been done trying to highlight the challenges that teachers experience during integration of teaching technologies. One such study was done by Kebede and Achamyeleh Getemshe (2018) on the factors influencing teachers to use ICT for teaching purposes at Amhara in Ethiopia. The study used descriptive survey design on three hundred and three teachers, ten principals and four District Educational Officers. Questionnaires and interviews were used. The respondents reported that lack of ICT facilities and materials as one major challenge. The study targeted Secondary Schools .

Another study by Ghavifek et al (2015) on teaching and learning with ICT tools; issues and challenges from teachers' perception, sought to determine challenges of using ICT tools in teaching and learning in the classroom among school teachers found that lack of ICT resources, time and technical support were the obstacles identified by teachers. This study targeted high school teachers. Sylvestene Munyengade etal (2017) did a study on primary school teachers' perception on ICT integration for enhancing teaching and learning through implementation of one laptop per child programme in primary schools in Rwanda. The study sought to identify challenges hindering one laptop per child programme. It found that teachers had positive attitude towards the programme. The challenges identified were that teachers lacked ICT skills, technological tools and adequate infrastructure. This research used quantitative method and therefore never sought opinion of the teachers on how some of these challenges could be handled. The same findings were realized when Aishah Alkahtari (2017) did study on the challenges facing the integration of ICT in teaching in Saudi secondary schools. The study sought to identify challenges Saudi secondary schools face when integrating ICT in teaching in Saudi secondary schools. The study employed open headed questions and interviews.

Andiema (2015) sought to evaluate challenges of adoption ICT on teaching. It used descriptive and explorative research design and used questionnaires and interviews on six thousand, seven hundred and twenty eight teachers. The study found that schools lacked adequate funds to adopt ICT, classrooms were not renovated, computer labs were not in place, teachers were not trained and lacked manuals to guide them. These challenges seem to have come from the school administrators and tend to overlook classroom teachers. Another study in Vietnam by Pham Thi To Nhu (2019) et al on issues and challenges of using ICT for teaching English found that lack of ICT

competence , lack of ICT facilities, oversized classes, heavy teaching load and lack of technical support as some of the challenges that teachers experienced. This study was done in a population of different culture and economic settings and therefore its findings cannot be generalized within the area of this study.

A study on the challenges of implementing information communications and technology based online learning in Chinese independent high schools in Malaysia by Mak Vee Vin, Joanna Tan Tjin and Cheah Kok Sung (2019) found that some of the challenges were unstable internet, lack of training, lack of support from teachers and lack of time. The perception of teachers towards ICT in enhancing teaching was positive. This study was done in Malaysia which is technologically more developed than Kenya. Further the study was done in high schools. Ibrahim et al (2016) did a study to investigate challenges facing ICT use in teaching and learning in public secondary schools in Nigeria. Descriptive design was used together with questionnaire and surveys. It found out that teachers were craving for ICT integration in teaching. The challenges identified were absence of ICT infrastructure, ICT incompetence, and lack of both time and technical support. These findings are similar to a study done by Kumar and Ben Kei Danil (2016), which sought to identify challenges that lecturers experienced when integrating learning technologies into teaching within Fijian polytechnic. Ensaf M, (2014) in a study of the barriers to the use of ICT in teaching in Saudi Arabia also found that lack of access to ICT, lack of training and lack of time as some of the challenges that teachers experienced while integrating teaching technologies in the classroom.

On the contrary a study done by Tarus, Gichoya and Muumbo, (2015), on challenges of implementing E-learning in Kenya with a case study of public universities, found that denial of copy rights was a major concern for university lecturers. That the

lecturers believed the modules they develop for e-learning should not belong to the university as it is. Other challenges were heavy workloads, insufficient internet connectivity and limited ICT skills. The same opinion is held by findings of Chien, S. P., Wu, H.K & Hsu, Y. S (2014) on an investigation of beliefs of teachers and their usage of technology based assessments. The teachers believed institution policies and regulations had negative effect on ICT integration in teaching. The teachers believed there was a lot of paper work that strained time even though eighty five percent of the respondents believed technology based teaching to be useful. These studies were done in higher levels of education such as secondary schools and universities. The findings are not adequate to generalize for teachers of primary schools. Also the studies were done on ICT generally without any specific findings on effect of hypermedia teaching approach on academic performance in Social Studies. Moreover the few studies done in primary schools were done in areas that are technologically advanced such as China, USA and Malysia. These areas also have different cultural and economic settings compared to Kenya. Therefore, there was dare need for this study.

2.6 Summary of the Existing Gaps in Reviewed Literature

The table below shows the summary of the identified gaps in the reviewed literature.

Studies Reviewed	Key Findings	Research Gaps
Makhoha and Mutisya (2016) ,Crawleyand Fine (2004),Yan (2008), Al Bataineh (2014) ,Mulenga and Phiri (2018) Ilhan and Oruc (2016) ,Yunkul and Er KO (2014),Yamat, Ismail and Shah (2012) Gachinu (2014) ,Acikalin and Duru (2015), Harshtorne (2015) and Davies and West (2014)	• Teachers rarely adopt Hypermedia in teaching Social studies • Technology can have positive effect on performance in English, Mathematics and Sciences among Secondary School and university students •	• Knowledge gap on effect of effective and efficient utilization of Hypermedia in teaching on performance of Social studies among Primary School pupils • Knowlegde gaps on challenges hindering use of Hypermedia in teaching in primary school set up
Studies Reviewed	**Key Findings**	**Research Gaps**
Makhoha and Mutisya (2016) ,Crawley and Fine (2004),Yan (2008), Al Bataineh (2014) and Mulenga and Phiri (2018) Achamyeleh Getemshe (2018),Ghavifek et al (2015),Munyengade etal (2017) ,Andiema (2015), Thi To Nhu (2019) and Tarus, Gichoya and Muumbo, (2015)	• Secondary and University educators have diverse perceptions of easy, usefulness influence level of integration of ICT tools and resources • Teaching using technology faces many challenges in secondary school and colleges	• Methodological, Contextual and knowledge gaps on Primary School set up and effects on performance in Social Studies • Contextual ,knowledge and methodological gaps on Primary School set up and effects on performance in Social Studies

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter clearly explains the design used in the study, variables, area of study, target population, sampling procedures and sample size. It also includes; research instruments used, piloting, reliability and validity, data collection procedures, data analysis and legal and ethical considerations.

3.2 Research Design

Research design refers to a plan that provides a roadmap on how a study will be effectively done. Flick (2013) believes that a research design is concerned on how to plan a study. Merriam (1998) referred research design as a process of describing and evaluating the performance of programs in their natural environment with emphasis on the process of implementation. This study utilized quasi experimental research designs with both quantitative and qualitative techniques.

Cash, Stankovic and Storga (2016) define experimental research design as keeping records of observations, either qualitative or quantitative made by defined and recorded operations conducted under defined conditions, and examination of data using appropriate mathematical and statistical rules to determine whether significant relations exist. Effective forms of experimentation are core to elucidating variables, and developing and testing relationships between the dependent and independent variables (Nesselroade & Cattell, 2013). In this study, quasi experiment design was chosen because it was capable of demonstrating cause and effect and provides high quality evidence (Cash, Stankovic & Storga, 2016). The design

enabled the researcher to administer intervention on one group of pupils while observing the control group.

Table 3.1: Treatment and Control Groups

GROUP	PRE-TEST	TREATMENT	POST-TEST
Experimental Group	K_1	X_1	K_3
Control Group	K_2	X_0	K_4

Where: $\mathbf{K_I}$ and $\mathbf{K_2}$ is pre-test

$\mathbf{X_1}$ is intervention administered

$\mathbf{X_0}$ is no intervention

$\mathbf{K_3}$ and $\mathbf{K_4}$ is Post-test

The researcher selected eight Public Day Primary schools which had similar academic performance with an overall mean score of between 250 marks to 280 marks in Kenya Certificate of Primary Education in previous year in Kibwezi Sub-County. Purposive sampling was used to select the list of Primary schools which had reliable computers. After which, four Primary school were randomly assigned the experimental group category from the list. Four more primary schools were randomly assigned the control group category making a total of eight. This ensured both control group Primary schools were similar as possible to the experimental Primary schools Category at the beginning of the experiment and during the intervention, the subjects have comparable homogeneity of variance among the units through lottery method.

The next step involved the administration of a pre-test to class seven pupils to get baseline data on the pupils' performance. Baseline test was aimed at ensuring that pupils involved in the study had similar ability before the beginning of the intervention. It was followed by the treatment of the experiment group to the hypermedia intervention for a period of three weeks. Once completed, the researcher

collected data from both the control group and the experiment group in the post-test. The quasi experiment used pre-test and post-test control group design to examine the influence of hypermedia on experimental group as compared to a controlled group of participants which used conventional methods (Muller & Seufert, 2018).

3.3 Study Variables

This study had independent and dependent variables. Dicks and Mason (2008) define an independent variable as characteristics that impact an outcome on the dependent variable. According to Tergan (1997) a dependent variable is what is measured in a study and what responds to the independent variable.

The study independent variables were; Social Studies teacher skills of handling Hypermedia, level of integration of hypermedia and Perception of usefulness of integrating hypermedia in teaching Social Studies to promote performance. The level of integrating hypermedia in class by teachers of Social Studies was classified as low, medium and high. Low ability referred to having little or no knowledge of using hypermedia while high ability meant use of hypermedia with ease. Level of use referred to the frequency in which hypermedia was used in teaching. Usefulness of hypermedia in teaching included content preparation, content delivery, communication among pupils and teachers, assessment and evaluation, sharing information and creation of simulated environment during content delivery.

Further, the dependent variable was pupils' performance in Social Studies. The performance included achievement in a Post-test. This was measured by comparing the mean scores and standard deviations of pre-test and post-test.

3.4 Location of the Study

The study was done in Kibwezi Sub County, Makueni County in the South Eastern region of Kenya. Makueni County has nine Sub-Counties including Kibwezi Sub-County. The Sub-County was selected because it has continuously performed poorly in Social Studies, having been the last for the last four years in KCPE performance in Makueni County. Therefore, the Sub-County was of interest because it records under performance in national examinations and has schools with adequate computer infrastructure (KNEC KCPE REPORT 2019). The Sub-County is approximately 200km to the South East of the capital city of Kenya, Nairobi.

3.5 Target Population

Gudykunst (2001) defines a target population as the entire group, individuals or objects that a researcher is interested in generalizing the conclusion of a study. In this study, the target population comprised of eighty three primary schools with an enrolment of 2,478 pupils in upper primary and 164 teachers of Social Studies totaling to 2,642. The study engaged class seven pupils as the second senior most class and purposively avoided class eight pupils since they were preparing for national examinations which are scheduled in December.

The study further targeted eight schools in which four of them have functional and consistence ICT infrastructure provided by a Non-Governmental Organization. The enrolment was three hundred and seventy six class seven pupils. Each of the eight schools had two teachers of Social Studies teaching in class seven. This makes total respondents to three hundred and ninety two.

3.6 Sampling Techniques and Sampling Size

Dicks and Mason (2008) describe that sampling as the selection of subgroup of individuals or objects from a population to assist in estimating the characteristics of the entire population.

3.6.1 Sampling Techniques

Sampling techniques are the strategies used to choose subsets. This study utilized purposive sampling. Kothari (2004) highlights that in non-probability sampling, individual units for the sample are selected by the researcher where the choice of the researcher of the individual units is paramount.

Kibwezi Sub County was purposively selected because it lags behind other Sub Counties in Makueni County both in general performance and that of Social Studies. This is according to information in the office of the Director of Education Kibwezi Sub-County. Further, the Sub County has several primary schools with reliable ICT infrastructure supported by a non-governmental organization. Therefore, the researcher found it suitable to study if Hypermedia can be used as a remedy to poor performance in Social studies since it has been used to promote performance in English, mathematics and Sciences.

At Schools level, four schools with reliable ICT infrastructure were purposively selected to cater for experiment group. Each of the schools had computer rooms with at least fifty desk top computers, three laptops, internet router, connected to electricity and two printers .The other four control group schools were randomly selected from the randomized list. Class seven pupils were purposively selected as the class of study as the pupils in class eight were preparing to sit for Kenya national primary

examinations. Similarly, teachers of Social Studies handling class seven were conveniently selected to participate in the study.

3.6.2 Sample Size

Sample size, according to Dicks and Mason (2008) is the number of subjects chosen from target population to participate in a study. This study adopted Pretest- Post-test non-equivalent group design model of quasi experimental designs (Johnson & Onwuegbuzie, 2004). Eight schools were used as study group. The researcher divided the study group into two. Four schools were for experimental group and the other four schools for control group. Majority of schools in the area of study have class seven enrolments of more than forty pupils. Each of the schools involved in the study was represented by forty five pupils leading to a sample size of three hundred and sixty. Where schools had higher number of pupils than the sample size, the researcher subjected all of them to the same test and teaching but during the analysis, the extra pupils were randomly removed. A total of thirty two teachers of Social Studies were engaged who could teach Social Studies in the selected schools. The sample for pupils was three hundred and sixty which represents 14.5% of the targeted pupil population, while the thirty two teachers represent 19.5% of the targeted teacher population. The sample size was within the recommended boundaries of between 10 and 30 percent (Lakens, 2022).

Table 3.2: Sample Participants Matrix

	Number of Schools	**Pupils**	**Social Studies Teachers**
Experiment Group	4	180	16
Control Group	4	180	16
TOTAL	8	280	32

3.7 Research Instruments

According to Gudykunst (2001) data collection instruments are implements that are utilized to garner information from the sampled study participants. In this study, the researcher used questionnaires, interview schedule, observation checklist and test measures to collect data.

3.7.1 Teachers of Social Studies Questionnaire

The questionnaire was developed and used to collect information about the teachers' factors influencing integration of hypermedia in teaching Social Studies, level of integration and challenges encountered when using hypermedia technology in teaching. In the questionnaire, there were four sections. Section A comprised of general and demographic information. Section B addressed the teacher factors influencing hypermedia integration. Section C addressed the teachers' level of use of hypermedia technology and section D on the challenges encountered when integrating hypermedia technology in teaching.

3.7.2 Performance Achievement Test

Test measures included a pre-test and a post-test measure. The pre-test instrument was prepared based on standard five and standard six content on the topic of law, peace and conflict resolution. This topic was chosen because according to KNEC reports of 2014 to 2019, the questions from the topic were challenging to pupils. The pre-test consisted of multiple choice questions and structured questions covering all the levels in the cognitive domain.

The post-test measure was done to determine the effect of the intervention on pupils' performance in Social Studies. The post-test comprised of multiple choice questions

and structured questions. The questions were developed based on the lesson objectives to ensure validity of the test items. The difference in scores between the pre-test and the post-test were used to determine whether the integration of hypermedia in teaching of Social Studies influences pupils' performance. To avoid interruption of the study, it was carried out during a period of minimal co-curricular activities that involve pupils to be outside the school like games, music and drama, workshops, seminars and conferences.

3.7.3 Observation Checklist

A checklist was used to verify the extent of the integration of hypermedia technology in teaching. The checklist was used to record availability, adequacy and usage of hypermedia resources in class during Social Studies lessons. The resources expected were; computer laboratories, hypermedia lesson timetable, laptops for the teacher, internet access and LCD projectors. The second part was used to record teachers of Social Studies preparedness in using hypermedia, skills and competencies of handling hypermedia and pupils engagements during Social Studies lessons.

3.7.4 Interview Schedule

An interview schedule was utilized to identify other issues arising from the study identified by teachers on integration of hypermedia in teaching Social Studies in primary schools.

3.8 Pilot Study

Petang (2023) argue that piloting stage is crucial in any study so that all the tools are pre-tested to ensure that they appropriately meet the study objectives before the actual execution of the research in the field. Pilot study was conducted in two schools in

Makindu Sub-County with the same characteristics and parameters as Kibwezi Sub County in Makueni County. The pilot study targeted two primary schools, one that had a functional computer room and another which lacked. The sampled schools, classes and procedure of interventions were similar to the ones selected for the study. Through the pilot study, the researcher was able to detect deficiencies in the instruments to be used in the research.

3.8.1 Validity of the Research Tools

Dicks and Mason (2008) define validity as the extent to which scores permit proper inferences to be ascertained about a group of individuals for an identified purpose. The pretests and post tests were developed by the researcher and examiners of Social Studies at KCPE level (2014 to 2019). Then they were validated by senior KCPE Social Studies examiners. The questionnaire, observation checklist and interview schedule were got from various validated tools and given to experts of measurement and evaluation in the Department of Educational Communication and Technology for validation. To test for content-related, the researcher sought to determine the appropriateness of the items on the tools. The content and format of the items on the instruments were scrutinized by peers. Further assistance was sought from the supervisors who were requested to assess and review relevance of the content.

3.8.2 Reliability of the Research Instruments

Reliability is the extent to which study instruments measure something more than once and produce stable results consistently. The researcher ensured that reliability of the research tools used the test re-test method. In test re-test method; the same questionnaire was administered twice to the same group of the subjects after three

weeks while ensuring that the initial conditions for the study were maintained. Pearson product moment correlation coefficient formula was used to calculate the correlation coefficient to help figure out the extent to which the contents of the questionnaire were consistent in soliciting similar responses each time the instrument was administered. A coefficient of 0.5 was considered sufficient for the study instruments to be admissible for application.

3.9 Data Collection Techniques

Once a clearance to conduct the research was obtained from the Graduate School. The researcher sought for a research permit which was obtained from the National Commission for Science, Technology and Innovation (NACOSTI). The researcher then sought authorization from the Sub-County Director of Education at Kibwezi Sub County. Further, the permission of the heads of institutions involved in the study was sought before the study commenced.

Thereafter, the researcher held a one day training with the sixteen teachers of Social Studies from the four experiment schools and exchanged contacts where the teachers of Social Studies were to consult regularly incase of any challenge. The training was on the integration of hypermedia in teaching of Social Studies where content was delivered through a hypermedia website which was developed by the researcher. The teachers and the researcher came up with Hypermedia integration schedule where pupils were to be taught using the hypermedia approach while the control group continued with the conventional teaching methods.

The second week of the schedule required the researcher and computer technicians of experiment schools to test and verify the suitability of desktops, tablets and laptops for use in integrating hypermedia in teaching while the teachers of Social Studies

helped administering the pre-test instrument to both experiment and control group before the intervention. The test covered several topics taught in classes five and six. The pre-test was administered by the teachers of Social Studies with help of the researcher. In order to establish the influence the intervention has on pupils' performance, post-test instruments were given out at the end of the given period to both the control and experimental groups. To ensure that both groups covered the topic within the provided time, the were given a common time plan and were continuously monitored by researcher through frequent visiting and carrying out lesson observations in the experimental group categories. A checklist was completed as the treatment was being completed. The researcher also issued questionnaires to the teachers of Social Studies at the end of the term during which the learners were taking post-test assessments. After the questionnaire was administered, the researcher did a one on one interviews with teachers so as to get more information on perceptions on usefulness of hypermedia in promoting performance in Social studies and on challenges encountered during implementation of hypermedia in teaching.

3.8 Data Analysis

Data collected was both quantitative and qualitative form. Quantitative data from questionnaires, Pre and post-tests was analyzed using both descriptive and inferential statistics in the form of t-tests so as to test the hypothesis of the study. Qualitative data from the observation checklist and interviews was thematically analyzed and reported in frequency tables. This was done through statistical package for the Social Sciences version 21. Data was first coded, entered into a computer and descriptive analysis done.

It was presented in forms of the measures of central frequencies and standard deviation. Further, data of qualitative data was categorized to establish themes, coded and the data was fed into a computer and a descriptive analysis was done. This process presented data in form of frequencies, percentages and measures of central tendency. Further analysis was done based on objectives of the study. The findings were reported using charts, figures and tables.

3.9 Legal and Ethical Issues

Ethical standards were observed during the research. Confidentiality, anonymity and informed consent as the basic principles were followed. First, permission was sought from Kenyatta University for the study to be done. This facilitated getting a research permit from NACOSTI and the Kibwezi Sub-County Director of Education. The sampled schools were then visited to gain consent from the Head Teachers. The researcher highlighted the purpose of the study and the methods to be used to the concerned teachers. Assurance was given that the data collected would only be utiltised for the study purposes only. Further, the researcher assured the teachers and pupils of confidentiality of their identities and protection of private information gathered.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents; the findings, interpretations and discussions according to the objectives of the study. The study objectives were to:

v. Establish whether the integration of hypermedia in teaching of Social Studies influences Pupils' performance.

vi. Investigate factors influencing teachers to integrate hypermedia in teaching of Social Studies in Primary Schools.

vii. Find out the level of integration of hypermedia in teaching of Social Studies in Primary Schools.

viii. Investigate challenges experienced in integrating hypermedia in teaching of Social Studies in Primary Schools.

4.2 Participants Response Rate

The study sampled 396 participants (pupils=360, teachers= 32). Out of these, 280 pupils and 28 teachers participated, representing a response rate of 77% and 87% respectively. The findings are shown in Table 4.1.

Table 4.1 General Information

Respondents	Sample	Participants	Percentage
Pupils	360	280	77.7%
Teachers	32	28	87.5%
Total	392	308	78.6%

According to Mugenda and Mugenda (2003) a response rate above 50% is considered acceptable representative of a sample of a study.

4.3 General Demographic Information of the respondents

This section presents the general information and demographic information of the participants of the study.

4.3.1 Demographic Characteristics of the Respondents

The researcher collected the demographic characteristics of pupils who were the primary respondents for the current study. The researcher collected information on the gender and the number of pupils in the classes. The findings are shown in table 4.2.

Table 4.2 Demographic Characteristics of Pupils

		Gender	
Control Group		**Frequency**	**Percent**
	Male	75	53.2
	Female	65	46.8
		No. of Students in a Class	
	Below 40	63	45.2
	41-45	70	50.0
	46+	7	4.8
	Total	**140**	**100.0**
		Gender	
Experimental Group	Male	68	48.4
	Female	72	51.6
		Number of students in Class	
	Below 40	13	9.7
	46+	127	90.3
	Total	**140**	**100.0**

Table 4.2 shows that pupils were divided into the control group and the experimental group. In the control group, over half (53.2%) of the pupils were male and half of the pupils (50%) were drawn from classes with 41-45 pupils and only 4.8% from classes with over 46 pupils. In the experimental group, over half

(51.6%) of the pupils were female and over three quarters (90.3) were drawn from classes with over 46 pupils.

The researcher also collected the demographic characteristics of teachers. They included age, sex, qualification and years of training. The findings are shown in table 4.3.

Table 4.3 Demographic Characteristics of Teachers

Age of Teachers		
	Frequency	**Percent**
21-30	21	75.0
31-40	5	17.9
41-50	2	7.1
Sex		
Male	11	39.3
Female	17	60.7
Qualification		
P1	17	60.7
P2	2	7.1
Dip	4	14.3
BED	3	10.7
Others	2	7.1
Years of Teaching		
3-5	14	50.0
10+	14	50.0
Total	**28**	**100.0**

Table 4.2 indicates that three quarters (75%) of the teacher respondents were aged 21-30 years and those aged 41-50 were the least (2%). Female teachers formed the majority (60%) compared to the male counterparts at 39.3%. Teahers with a P1 qualification were the majority at 60.7% with P2 and Other qualifications forming the lowest (7.1%). Half of the teachers had a qualification of 3-5 years just as those with an experience of 10 years and above.

4.4 Findings for Specific Objectives

The findings are as follows in accordance to the study objectives.

4.4.1 Findings on the Influence of Hypermedia Integration in Teaching of Social Studies and Effect on Pupils' Performance

The first objective was to find out how the integration of hypermedia in teaching of Social Studies influences performance of pupils. The objective was measured in terms of paired t-test for the scores of both control and experimental groups. The findings were presented in tables 4.9 and 4.10

Table 4.9 t-Test: Paired Two Sample for Means for the Control Group

	T1	T2
Mean	6.401360544	11.15646259
Variance	7.200820054	18.58494083
Observations	147	147
Pearson Correlation	0.889157353	
Hypothesized Mean Difference	0	
Df	146	
t Stat	-25.24935009	
P(T<=t) one-tail	1.96702E-55	
t Critical one-tail	1.655357345	
P(T<=t) two-tail	3.93404E-55	
t Critical two-tail	1.976345655	

The data above show that the difference between the means of the tests (two) in the control group where test 1 was (M = 6.401, SD = 7.201) and test 2 (M = 11.156 SD=18.585) were significant (t [146] = -25.249, p <3.93E-55). This means that there was improvement in the control group without any teaching intervention. The researcher proceeded to compare the scores of the pupils in the experimental group from the first test and the second test. Table 4.10 presents the findings

Table 4.10 Paired t-test for the Experimental Group

	T1	T2
Mean	7.272109	14.93878
Variance	8.363806	38.82499
Observations	147	147
Pearson Correlation	0.794564	
Hypothesized Mean Difference	0	
Df	146	
t Stat	-21.5806	
P(T<=t) one-tail	1.43E-47	
t Critical one-tail	1.655357	
P(T<=t) two-tail	2.86E-47	
t Critical two-tail	1.976346	

Table 4.10 shows that the mean differences of the two tests in the experimental group where test 1 (M = 7.272, SD = 8.364) and test 2 (M = 14.939, SD = 38.825) were significant (t [146] = -21.581, p=2.86E-47). This means that there was significant improvement in the scores of the pupils with a difference of 7.767 meaning that the integration of hypermedia helped to improve the performance of pupils in Social Studies. The mean score was greater than that of the control group meaning the pupils performed better than those in the control group.

The researcher also established that the mean difference in performance was significant (t [146]=-21.581, p= 2.86E-47). This means that hypermedia use helped pupils to understand Social Studies content and to perform better compared to those who were not taught with it. The null hypothesis was stated as follows;

H_{o1}: There are no significant differences in performance between pupils taught using Hypermedia and those taught using conventional methods .

It was thus rejected in favor of the alternative and restated as follows:

H_{A1} There is a significant difference in performance between pupils taught using Hypermedia and those using conventional methods.

The findings for this objective showed that the control group improved their performance without hypermedia use with a mean difference of 3.955. This was lower than the mean difference of the experimental group which was 7.767, which means that hypermedia use was more effective in teaching pupils than conventional methods.

The results agree with Oruc (2016) who found hypermedia improved learner performance. However, they slightly agree with Yunkul and Er (2014) who found hypermedia only boosted learner attitude towards multimedia software in specific subjects. This is the same as Yasmat et al. (2012) who found hypermedia boosted attitudes towards teaching and learning of English, the same as Gachinu (2014) and Yara and Wanjohi (2013) who saw improved comprehension of content in Kenya. Other studies that agree with the current study are De Souza and Nel (2017) and Shah and Khan (2015) who found learners who used hypermedia were able to construct their own knowledge through enriched approaches that promoted meaningful learning .

The results also agree with Harshtone (2015) and Davies and West (2014) who found that hypermedia improved knowledge of content and pupils' motivation and improved communication between teachers and pupils respectively. The study agrees with Saiz-Manzanares et al. (2019) who found that using hypermedia with learning management systems increased the effectiveness of student learning, facilitated personalized learning and enhanced in-depth and better-quality learning. Also, Sombra del Rio et al. (2018) found an overall positive learning experience with the use of hypermedia which agrees with the current study. Finally, the study resonates with Gaudence (2017) who found that hypermedia promoted learning achievement through improved teaching and delivery.

4.4.2 Findings on the Factors that Influence Teachers Integration of Hypermedia in Teaching of Social Studies and effects on Pupils Performance

The second objective was to measure the factors that influence teachers' use of hypermedia in teaching of Social Studies. The objective was measured in terms of perception of ease of use and perception of usefulness of hypermedia use which were measured using a Likert form of scale and open-ended questions. The findings for this objective are shown in tables 4.4 and 4.5.

Table 4.4 Usefulness of Hypermedia

Item	Mean	Std. Deviation
1. Using hypermedia helps make delivery of content quick and easy	1.82	.476
2. Using hypermedia improves communication with my pupils	2.11	.786
3. Hypermedia saves time when I am preparing subject content	1.86	.891
4. Use of hypermedia in class enhances and supports sharing of information	1.75	.645
5. Hypermedia enables me create a stimulated learning environment	1.75	.799
6. Hypermedia reduces the time I spend on assessment and evaluation of pupils	2.00	.679
7. Overall, hypermedia is useful in teaching social studies	1.79	.568
Aggregate Score	**1.8685**	**0.692**

The findings above indicate that aggregate score was (M=1.8685, SD= .692) which means that majority of the respondents either scored strongly agree or agree. This means that most of them either strongly agreed or agreed that hypermedia is useful in instructing pupils and has a positive effect on pupils' academic performance.

The researcher proceeded to enquire from the participants why they thought hypermedia is an important addition to the teaching and learning of Social Studies.

Seven major themes were identified as the reasons why hypermedia integration in teaching is useful to teachers. The themes were grouped and tabulated as shown in table 4.5

Table 4.5 Strengths of Hypermedia

Strength of Hypermedia	Frequency	Percent
Hypermedia is easy to use and it is time-saving,	27	96.4
It helps teachers link information,	14	50
Increases learner attention and motivation to learn,	16	57.1
It is learner-centred,	14	50
Offers a variety of available information,	7	25
It improves communication,	4	14.3
It creates stimulated learning	4	14.3
Provides real learning	14	50

From table 4.5, most (96.4%) of the teacher respondents believed that hypermedia is easy to use and time-saving while only 14.3% believed that it improves communication and it creates stimulated learning. This finding shows that the ease of use and efficiency motivates teachers to make use of the same. The researcher proceeded to inquire from the pupils about their motivation to use hypermedia. This was measured in terms of a Likert scale in which they showed their agreement with a different statement on hypermedia. The findings are shown in table 4.6.

Table 4.6 Learner Motivation Scale

	Mean	Std. Deviation
Use of hypermedia makes learning of social studies more enjoyable	4.6532	0.83661
Use of hypermedia makes me understand social studies concepts better	4.4032	0.69749
Use of hypermedia reduces the time taken to understand difficult concepts	3.7339	1.35015
Hypermedia makes learning of social studies more effective	4.0565	1.28975
Use of hypermedia in learning social studies is time consuming	3.2581	1.46987
Use of hypermedia offers a wide range of xperience that are otherwise not available	3.9032	1.38176
A computer is a valuable device for learning social studies	4.2742	0.99869
I can still learn social studies better without the computer	2.7984	1.45379
Computer is not conducive for learning	3.2823	1.56984
Computer is more suitable for use in entertainment	2.0968	1.3993
Aggregate Score	**3.64598**	**1.244725**

The findings above indicate an aggregate score of (M = 3.646, SD = 1.245) meaning that majority of the learner respondents either scored neutral or agree. This could imply that majority of them agreed that use of hypermedia creates a positive impact in their learning or they were not sure whether it makes any difference in their learning. This could further mean that use of hypermedia may be limited in most schools due to other factors like teacher knowledge-ability or the number of available computers. The researcher also proceeded to ask about the abilities of hypermedia. This was measured using a mean, standard deviation and frequencies. The findings are shown in table 4.6 and table 4.7.

Table 4.7 Abilities of Hypermedia

Item	Mean	Std. Deviation
I understand how hypermedia works in teaching	2.07	.466
I find it easy to learn and use hypermedia in instructing Social Studies	1.96	.429
I feel like I need a have basic computer training to help me further integrate hypermedia in the teaching of Social Studies	2.14	1.113
It takes a lot of mental effort to integrate hypermedia in teaching Social Studies	2.39	.956
Overall, hypermedia is easy to apply in teaching Social Studies	1.93	.813
Aggregate Score	1.906	.7554

Table 4.6 shows that most of the teacher respondents scored (M=1.906, SD=.7554) meaning that majority strongly agreed or agreed to the items. This indicates that most of them had a high ability in using hypermedia. The findings for this objective showed that majority of the respondents agreed or strongly agreed (M = 1.869, SD = .692) that hypermedia was useful in teaching pupils. In addition, 96.4% of the participants highlighted that hypermedia is easy to use with 14.35 observing that hypermedia improved communication and it created a stimulated learning. The learner respondents indicated their motivation to be neutral (M=3.646, SD = 1.245) meaning that either they were not sure whether hypermedia created an impact in their learning or it had a positive impact in their learning. Furthermore, majority agreed or strongly agreed on the items regarding the abilities of hypermedia to improving learning.

The findings above seem to agree with Makhoha and Mutisya (2016) who found that teacher perception of ICT influenced the decision in integrating it to the teaching and learning environment. Also, the findings agree with Zagumny and Zagumny (2005) who found ICT integration in teaching and learning was more accepted by pre-service

teachers. Al Bataineh (2014) found a positive correlation between perception and integration of ICT which means that positive attitudes influenced ICT adoption among upper primary school teachers. Mulenga and Phiri (2018) found that although teachers in Zambia had poor ICT skills, majority had a positive opinion that integration of ICT in primary school could impact teaching and learning positively.

The study also agrees with Atsoglou and Jimyiannis (2013) and Ibrahem (2012) who found ICT use, precisely hypermedia, to have the potential of supporting classroom learning by stimulating hearing and visual stimuli. The findings seem to be related to Pang et al. (2015) who found that hypermedia to help pupils in comprehension of the subject content especially in improving their literacy. Also, the findings agree with Joo et al. (2018) who found technology use as enabling pupils to participate actively in class discussions. The findings, too, resonate with Momanyi et al. (2016) found hypermedia to be learner-centred and so enabling collaborative engagement in class. Baodu et al. (2014) and Miima (2013) agree with these findings because they found use of hypermedia to have a positive impact on learning as well as creating an enabling environment for pupils to make sense of the taught content.

The findings however contradict the findings by Sulungai et al. (2012) who found teachers in Kenya's Kakamega Sub-County to have low knowledge of ICT components and unfavorable attitude towards it. The study by Wanjala (2016), too, partially agrees with the current findings because teachers in Kenya indicated that they agree with integration of hypermedia teaching but they lacked the requisite skills for using it.

4.4.3 Findings on the Level in which Hypermedia is integrated in teaching of Social Studies and effect on Pupils performance in Social Studies

The third objective was to establish the level in which hypermedia is used when teaching Social Studies. This objective was measured using 5 point Likert scale :Highly Use (1), Moderately Use (2), Neutral (3), slightly use (4) and Not use at all (5) level of agreement by the teachers of Social Studies on utilization of ICT components in class and oral interviews. The findings for the objective are indicated in table 4.7 .

Table 4.8 Level of Use of Hypermedia Technology

Hypermedia	Mean	Std. Deviation
Internet	2.25	.585
Social Media	2.36	.621
Educational Software	2.36	.621
PowerPoint	2.89	.832
LCD Projector	2.79	.917
Google Maps	2.68	.772
Aggregate Score	**2.55**	**.725**

Table 4.8 shows that the aggregate score for the level of use of hypermedia is (M=2.55, SD=.725). This means that majority of them scored between moderately utilize and neutral. In such a case, it means that teachers who use hypermedia to guide pupils while teaching Social Studies, only do that at specific times or occasionally. From the oral interviews, the teachers of Social Studies quoted that they only use these media for specific topics or as they deem important depending on availability of time. Also 26 teachers agreed that the level of utilization of hypermedia can have positive effect of pupils' performance. The teachers agreed that a school where teachers highly utilize hypermedia technology in class will always post better results than those who use occasionally or not use at all. This was confirmed through high

performance of Primary schools in experimental groups as compared to those in control groups during the study.

These findings are closely related to Ghavifeker et al. (2016) who found that teachers in Malaysia had the requisite skills for ICT and hypermedia, but they rarely used it for teaching pupils except their own purposes. The study too relates closely to Marinniaz et al. (2020) who found University lecturers in Chile had a low utilization of digital resources due to lack of skills training on the same. The low utilization of ICT is also reflected in another study by Alkwaideh (2018) who found a profound resistance to the use of ICT in teaching due to negative attitudes. Furthermore, the findings seem to agree with those by Mafingila (2016) who found that learners showed that ICT was being used in Tanzanian schools but failed to give the level of integration. The findings however differ with Kumar (2016) who found Fijian teachers in polytechnic institutions as having quite favorable attitudes towards ICT media use and willingness to embrace.

4.4.4 Findings on Challenges Experienced by Teachers when Integrating Hypermedia in Teaching Social Studies and effect on pupils' performance

The fourth objective was made to investigate the challenges teachers experience in integrating hypermedia in teaching of Social Studies. This objective was measured in terms of a Likert scale where teachers of Social Studies indicated their level of disagreement or agreement with the different challenges. Findings for this objective are presented in table 4.11.

Table 4.11 Challenges in Integrating Hypermedia in Teaching Social Studies

	Mean	Std. Deviation
Inadequate time	2.25	.701
Inadequate technical administrative support	2.11	.786
High workload	2.11	1.133
Lack of interest to use	2.57	.920
Pupils having difficulties to use desktops	2.25	1.005
Incompatible with current assessment practices	2.46	.881
Aggregate Score	**2.292**	**0.904**

Table 4.11 shows the findings on the challenges faced in the integration of hypermedia in teaching Social Studies with (M=2.292, SD = 0.904). This means that most of the teachers of Social Studies either agreed or strongly agreed on the highlighted challenges. During interviews, teachers quoted lack of adequate training skills (23), poor preparedness (27), inadequate time (26) and poor internet coverage (27) as the major obstacles towards hypermedia integration in teaching of Social Studies in Primary Schools. This could mean that as much as the hypermedia was available, teachers faced difficulties in integrating them into daily use at primary school level.

During oral interviews, the teachers quoted the following as major challenges influencing adoption of hypermedia in class: Inadequate time to use (25), lack of technical support (28), heavy workload (27), poor interest (24), inability to use desktops (23) and incompatibility with assessments (25). The teachers argued that the consequences of this challenges is limited use of hypermedia in class hence leading to less interesting learning environment which make learners perform poorly in class especially in Social Studies.

These findings are in agreement with Ghavifek (2015) who found that teachers lacked equipped classrooms, time for teaching and technical support. It also agrees with Munyengade et al. (2017) who found teachers had lacked skills despite their positive effort and also Andiema (2015) who found schools to lack funds for running and adoption of ICT, depilated classrooms, lack of computer labs and poor administration practices. The findings agree that such challenges limit the teacher from utilizing hypermedia in class leading to consequently poor performance in class.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter summary of key findings of the study, conclusions from the findings and recommendations for policy and suggestions for further studies have been presented.

5.2 Summary of Key findings

This section presents key findings as per study objectives. The study aimed at determining the effect of integrating hypermedia in teaching of Social Studies on pupils' performance in Kibwezi Sub County, Kenya.

5.2.1 Summary on the Influence of Hypermedia Integration in Teaching of Social Studies and Effect on Pupils Performance

The first objective was to measure the influence hypermedia has on teaching of Social Studies. The findings showed that the score for test 1 (M=6.401, SD= 7.201) and test 2 (M= 11.156, SD= 17.585) were significant (t [146] = -25.249, p <3.93E-55). This meant that there was improvement in the control group without the use of hypermedia. Scores of the participants on the experimental group showed that test 1(M = 7.272, SD = 8.364) and test 2 (M = 14.939, SD = 38.825) were significant (t [146] = -21.581, p=2.86E-47). This meant the use of hypermedia to have been effective in teaching of Social Studies. The findings imply that use of hypermedia is effective because the experiment group had far better scores than the control group.

5.2.2 Summary on the Factors that Influence Teachers Integration of Hypermedia in Teaching of Social Studies and Effects on Pupils Performance

The second objective measured the factors that influence teachers' use of hypermedia in Social Studies' teaching. The findings showed an aggregate score of (M = 1.869, SD = .692) which means that majority of the respondents agreed or strongly agreed that hypermedia was useful in teaching pupils. In addition, 96.4% of the participants highlighted that hypermedia is easy to use with 14.35 observing that hypermedia improved communication and created a stimulated learning. The learner respondents indicated their motivation to be (M=3.646, SD = 1.245) meaning that either they were not sure whether hypermedia created an impact in their learning or it had a positive impact in their learning. Furthermore, majority agreed or strongly agreed on the items regarding the abilities of hypermedia as improving learning consequently improving pupils' performance in Social Studies.

5.2.3 Summary on the Level in which Hypermedia is Integrated in teaching of Social Studies and Effect on Pupils performance in Social Studies

The third objective was to establish the level to which hypermedia is used when teaching Social Studies. The findings showed an aggregate score of (M= 2.55, SD = .725) meaning that majority of the respondents sometimes or rarely used hypermedia. This could mean that teachers were reluctant to use hypermedia or only used it when they wished despite them having an allocated time.

5.2.4 Summary on Challenges Experienced by Teachers when Integrating Hypermedia in Teaching Social Studies and effect on pupils' performance

The fourth objective was to investigate the challenges faced while integrating hypermedia in teaching of Social Studies. A score of (M=2.292, SD = 0.904) was realized meaning that most of the teacher respondents either strongly agreed

or agreed to experience the highlighted challenges which included lack of time to use, inadequacy of technical support, high workload, lack of interest, difficulties by pupils using desktop computers and incompatible assessment practices. This was support by quoting the same challenges during oral interviews and lesson observation time. This could imply a general difficulty in the integration of hypermedia in teaching Social Studies which consequently limit teacher of Social Studies from creating a stimulating learning environment hence contributing to poor performance in Social Studies.

5.3 Conclusions of the Study

Basing from the findings of the research, the following conclusions were arrived at:

1. Hypermedia integration in teaching of Social Studies influences performance of pupils positively. Despite the limited use reported by teachers, applying the same in teaching in Social Studies may prove effective in disseminating information related to the subject.
2. There are various factors that influence teachers of Social Studies in using hypermedia. The most considered factors are ease of use and perception of usefulness of hypermedia in content delivery. Hypermedia is not considered as a tool to promote performance in Social Studies.
3. The level of utilization of hypermedia differs from one school to another. Some schools have reliable computer resources, most teachers occasionally use them. The level of motivation to use Hypermedia among teachers of Social Studies is very low and this affects how they embrace modern technologies in teaching, consequently influencing Social Studies performance negatively.

4. Integrating hypermedia in teaching of Social Studies has various challenges. Teachers lack time for integrating hypermedia in teaching, technical support challenges, heavy workload, low motivation, inadequate learner knowledge on use of computers and incompatible assessment practices. This makes it hard for teachers of Social Studies to integrate hypermedia in teaching hence contributing to low performance in Social Studies.

5.4 Recommendations

This section presents the recommendations for policy and suggestions for further researcher.

5.4.1 Recommendations for Policy

1. Since use of hypermedia has a positive effect on the performance of pupils in Social Studies, Ministry of education should formulate a policy for integration of the hypermedia in teaching in all subjects in Primary Schools in order to improve the performance of pupils.

2. All schools should have a policy for mandatory installation of computer rooms so that teachers can make use of the same more frequently.

3. Teachers should be equipped with the requisite skills of using computers in order to ensure a maximum benefit from integrating hypermedia in teaching of Social Studies.

4. Primary schools should create a policy for continuous check for challenges faced by teachers and pupils in using computer devices, and also allocate necessary resources for maintenance of computer rooms.

5.4.2 Suggestions for Further Studies

The following suggestions were made for further research;

1. This study focused on integration of hypermedia in teaching of Social Studies. Other studies should be done focusing on different subjects like languages and mathematics in primary schools.
2. This study used quasi-experimental design; other studies can be conducted using other designs to describe how hypermedia impacts the teaching of Social Studies.
3. The study focused on the integration of hypermedia in teaching. Other studies should be done to investigate how pupils interact with the same media while at home in order to compare which one has more influence.

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APPENDICES

Appendix 1: Teachers' Questionnaire

Section A: General and Demographic Information

i. Please Indicate your age group Category 21-30 ☐ 31-40 ☐ 41-50 ☐ Above 50 ☐

ii. Sex; 1. Male [ ] 2. Female [ ]

iii. Qualification P1 [ ], P2 [ ], Dip [ ], S1 [ ], AT 1 [ ], BED [ ], Untrained [ ], others

(specify)……

iv. How many years have you been teaching Social Studies: 0-3( ) 3-5( ) 6-10( ) more than 10( ).

Section B: Usefulness of Hypermedia

Please indicate the extent to which you agree with the following statements on the usefulness of Hypermedia: **SA-Strongly Agree, A-Agree, D-Disagree and SD- Strongly Disagree**

Statement	**SA**	**A**	**D**	**SD**
Using hypermedia helps make delivery of content quick and easy				
Using hypermedia improves communication with my pupils				
Hypermedia saves time when I am preparing subject content				
Use of hypermedia in class enhances and supports sharing of information				
Hypermedia enables me create a stimulated learning environment				
Hypermedia reduces the time I spend on assessment and evaluation of pupils				
Overall, hypermedia is useful in instructing of Social Studies				

1. Why do you think hypermedia is a necessary addition to the instruction of Social Studies?

_____

_____

_____

_____

_____

2. Do you think thatHypermedia

   i. Promotes content preparation and delivery? Please explain how?

   ii. Improves pupil-teacher communication and sharing of information? If Yes, How?

   iii. Assists teachers in assessment and evaluation of student? How?

   iv. Can help promote a stimulated environment? Please explain your answer

Section C: Abilities of hypermedia

Please indicate the extent to which you agree with the following statements on the ability of Hypermedia: **SA-Strongly Agree, A-Agree, D-Disagree and SD- Strongly Disagree**

Statement	**SA**	**A**	**D**	**SD**
I understand how hypermedia works in instruction				
I find it easy to learn and use hypermedia in instructing Social Studies				
I feel like I need to have basic computer training to help me further integrate hypermedia in the teaching of Social Studies				

It takes a lot of mental effort to integrate hypermedia in teaching Social Studies				
Overall, hypermedia is easy to apply in teaching Social Studies				

1. Does a teacher's competence in computers influence their perceptions of integration ability? Why?

2. Do you think that teachers with prior experience in using computers will likely integrate hypermedia? Why?

SECTION D: Level of use of hypermedia technology

Indicate the frequency of using the following computer resources in your teaching.

BASIC COMPUTER SKILL	**Always**	**Sometimes**	**Rarely**	**None**
Internet				
Social media				
Educational software				
Power point				
LCD projector				
Google maps				

SECTION E: Challenges Encountered During Integration of Hypermedia in Teaching

Please indicate the extent to which you agree with the following statements on the challenges encountered during hypermedia integration: **SA-Strongly Agree, A-Agree, D-Disagree and SD- Strongly Disagree**

Statement	**SA**	**A**	**D**	**SD**
Lack of time to use				
Lack of technical/administrative support				
High workload				
Lack of interest to use				
Pupils having difficulties to use desktops				
Incompatible with current assessment practices				

Appendix II: Observation Checklist

Date ……

Part A: GENERAL INFORMATION

Against each item are the words: availability (available, unavailable); adequacy (adequate, inadequate); and usage (usage, not used) for the section. The researcher ticked the most appropriate column with the help of the most relevant personnel.

	AVAILABILITY		**ADEQUACY**		**USAGE**		**COMMENTS**
Resource/facility	**Available**	**unavailable**	**adequate**	**inadequate**	**used**	**Not used**	
Computer laboratory							
Hypermedia lessons timetable							
Social Studies allocated to the timetable							
Laptop for teachers							
Internet access							
LCD projector							

Part B: Social Studies teacher

11. Does the teacher have a lesson plan? Yes ( ) NO ( )

2. List of teaching methods indicated in the lesson plan

a)……..

b)……

c)……

3. Classify the teaching method as;

Teacher centered ( ) Interaction ( ) Learner centered ( )

4. How does the teacher prepare the pupils before using the method?

5. When does the teacher reinforce key points in the presentation?

   a) Immediate ( )

   b) Later after presentation ( )

   c) At appropriate breaks ( )

   d) Withheld key points ( )

6. Teacher's competence on the use of the method

   Very good ( ) Good ( ) poor ( ) very poor ( )

7. Note any other relevant observations made during the lesson.

……
……
……..

Part C: PUPIL

Indicate the rating by placing a tick in the appropriate box using the scale below;

a) Not at all 1

b) A little 2

c) Fairly adequate 3

d) Adequate 4

e) A great deal 5

Students' Role	1	2	3	4	5
How is the pupils' participation in the lesson?					
Pupils' interaction with the teaching resource					
Pupils' interaction with each other					
pupils asking questions/seeking guidance					
Pupils interaction with the teacher					
Pupils' understanding of key points					

Appendix III: Interview Schedule

This interview aims at obtaining information on your experiences in the use of hypermedia in the teaching and learning of Social Studies. The information you provide was be highly confidential and was only be used for the purposes of this study. Your cooperation is highly appreciated.

Social Studies teachers interview schedule

1. What is your comment about the conditions under which students learn in your school? Probe on availability of ICT hardware and software.

2. What is the most predominant teaching method that you prefer to use?

3. What are some of the reasons why the method you have stated above is most preferred?

4. What are some of the specific ICT tools that you use in teaching and learning of Social studies?

5. What are some of the challenges that you encountered in teaching while integrating hypermedia.

6. In your opinion, what do you think should be done to improve the use of hypermedia in teaching and learning?

Appendix IV: Performance Achievement Tests

PRE-TEST

LAW, PEACE AND CONFLICT RESOLUTION

Instructions

a) Answer all the questions

b) From question one to three write down correct answers

c) From question four to fifteen choose one answer for each question

1. The white colour in our national flag signifies……..
2. The national language of Kenya that unites all Kenyans is…….
3. In Kenya people stand at attention when the national anthem is played in order to show ……for their country
4. Which of the following combinations consists of only national symbols in Kenya?

   A. The national flag, coat of arms and national schools

   B. The public seal, national currency and the constitution

   C. The national anthem, coat of arms and the public seal

   D. The constitution, the national schools and national anthem
5. The importance of law and order in a society is mainly to

   A. enable people live in harmony

   B. allow people work without fear

   C. protect property

   D. promotes good relationship among neighbors.

6. John and Peter had an argument over a lost book. David, their friend helped them to agree. Which one of the following ways did David use to resolve the conflict?

   A. Litigation

   B. Peace making

   C. Mediation

   D. Negotiation

7. Which one of the following activities is likely to weaken national unity in Kenya?

A. Employing relatives

B. Amending the constitution

C. Using a national language

D. Releasing reformed criminals

8. Which one of the following statements describes litigation as way of solving conflict in the society?

   A. Taking the matter to court

   B. Asking for forgiveness

   C. Discussing with one another

   D. Involving a third party

9. Two communities have disagreed over the ownership of a piece of grazing land. The best way through which peace can be maintained is by

A. Moving one of the communities to a new area

B. Teaching communities how to live together

C. Negotiating over the matter

D. Taking the matter to court

10. Three of the following are ways through which national unity can be promoted in Kenya. Which one is not.

A: Encouraging People to listen to vernacular radio stations

B:Encouraging people to participate in national games

C: Ensuring people are free to settle in any part of the country

D: Encouranging that people know how to sing the national anthem

11. Mzee Jasho has shared his piece of land among his children. A dispute arises over the different sizes of land that they have been given. The best for mzee Jasho to settle the dispute is by:

A: taking back the land

B: Ignoring the complains

C: Selling the Land and get money

D: Discussing the issue with family members

12. The reason why the Kenya national anthem is important is that

A. It was written when Kenya became independent

B. It increases unity among Kenya citizens

C. It is sang in all schools in Kenya

D. It is played during national celebrations

13. A standard seven prefect finds two classmates quarrelling in class. The right action for the prefect to take is to

A. Ignore the pupils

B. Punish the pupils

C. Send the pupils out of class

D. Discuss the issue with the pupils

14. Two Pupils are arguing about the ownership of a book. The best way for the teacher to resolve the conflict is by:

A: Encouraging the pupils to argue until they are tired

B: Withdrawing the book from the pupils

C; Listening to the argument and advising the pupils

D: Advising the pupils against arguing over the book

15. Which one of the following is true about the national flag of Kenya?

A. It is a symbol of national unity

B. It was given to Kenya by the British

C. Its colours represent the arms of government

D. It was inherited from freedom fighters

POST-TEST

Tests for law, peace and conflict resolution

Instructions

a) Answer all the questions

b) From question one to seven write down correct answers

c) Question eight to fifteen choose one answer for each question among the four answers

1. What is conflict?

2. A person who is invited by parties that are in conflict to help them solve their problem is known as ……..

3. Name any three causes of conflict in a society

4. State four ways of resolving disputes

5. Name the symbols of national unity

6. Name the factors that support national unity

7. State factors that undermine national unity

8. Which one of the following statements describes negotiation as a way of resolving conflicts in society?

   A. Discussing the matter with one another

   B. Asking for forgiveness

C. Involving a third party

D. Taking the matter to court

9. A person who is invited by parties that are in conflict to help them solve their dispute is called

A. A magistrate

B. An administrator

C. An arbitrator

D. A chief

10. Which one of the following groups consists of factors that promote national unity?

A. Sports and games, single currency and power struggle

B. National assembly, scarcity of resources and education

C. Sports and games, national assembly and single currency

D. Scarcity of resources, education and power struggle.

11. James' cattle have destroyed neighbor's crops. This has caused a dispute between them. The most appropriate way of settling this dispute is by

A. Reporting James to the police

B. James negotiating the issue with the neighbor

C. The neighbor giving James a warning

D. Reporting James to a religious leader.

12. A road contractor employed members of his extended family which caused conflict in the community. The contractor practiced

A. Tribalism

B. Racism

C. Favoritism

D. Nepotism

13. Which of the following actions by the government would best promote national unity?

A. Encouraging people to participate in economic activities

B. Punishing wrong doers

C. Encouraging domestic tourism

D. Building more educational facilities

14. Three of the following are factors that promote peace in a society except

A. Nepotism

B. Transparency

C. Obeying the law

D. Respect of one another

15. Which one of the following statements describes litigation as way of solving conflict in the society?

A. Taking the matter to court

B. Asking for forgiveness

C. Discussing with one another

Appendix V: Pupils' Progress Records

NAME	Group	Pre-Test score	Post-Test score

Appendix VI: Work Plan

ACTIVITY	2019		2020					
	July	**August - Dec**	**January – May**	**June**	**July**	**August**	**Sep**	**Oct**
Identification of the study area								
Review of the related literature								
Writing research proposal								
Data collection								
Research findings and Reporting								
Presentation								
Correction and typing of the final draft								

Appendix VII: Introduction Letter

Dear respondent,

RE: MED RESEARCH

I am Pius K. Wambua, a Post Graduate student at Kenyatta University pursuing Master of education Degree. As part of the requirement of the programme, I am carrying out a study on hypermedia integration use in classroom instruction. You have been selected to participate and respond to questions truthfully about the study. This research is academically based and therefore the information given will only be used for the stated intention and will be kept confidential. Your cooperation will be highly appreciated.

Thank you,

Yours sincerely,

Pius K. Wambua

Researcher.

Appendix VIII: Research Budget

Items	**Justification**	**Cost**
Stationery	Writing materials(pens paper notebook)	40,000
Internet cost	Cost of browsing, printing and internet provision	60,000
Typing and printing, Binding and photocopying	Typesetting charges, printouts and photocopies	35,000
Library cost	User charges	10,000
Travelling	To the library and meeting the supervisors	80,000
	Website design and content preparation	100,000
	Data collection	65,000
Contingencies	Power backups and other costs	50,000
Total		**440,000**

Appendix IX: Location and administrative area of Kibwezi Sub County.

Appendix X: Research Authorization

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 020-8704150

Our Ref: E55/CE/34801/2016

DATE: 7th December, 2021

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MR. WAMBUA PIUS KIOKO – REG. NO. E55/CE/34801/16

I write to introduce Mr. Wambua Pius Kioko who is a Postgraduate Student of this University. He is registered for M.Ed. degree programme in the **Department of Educational Communication & Technology.**

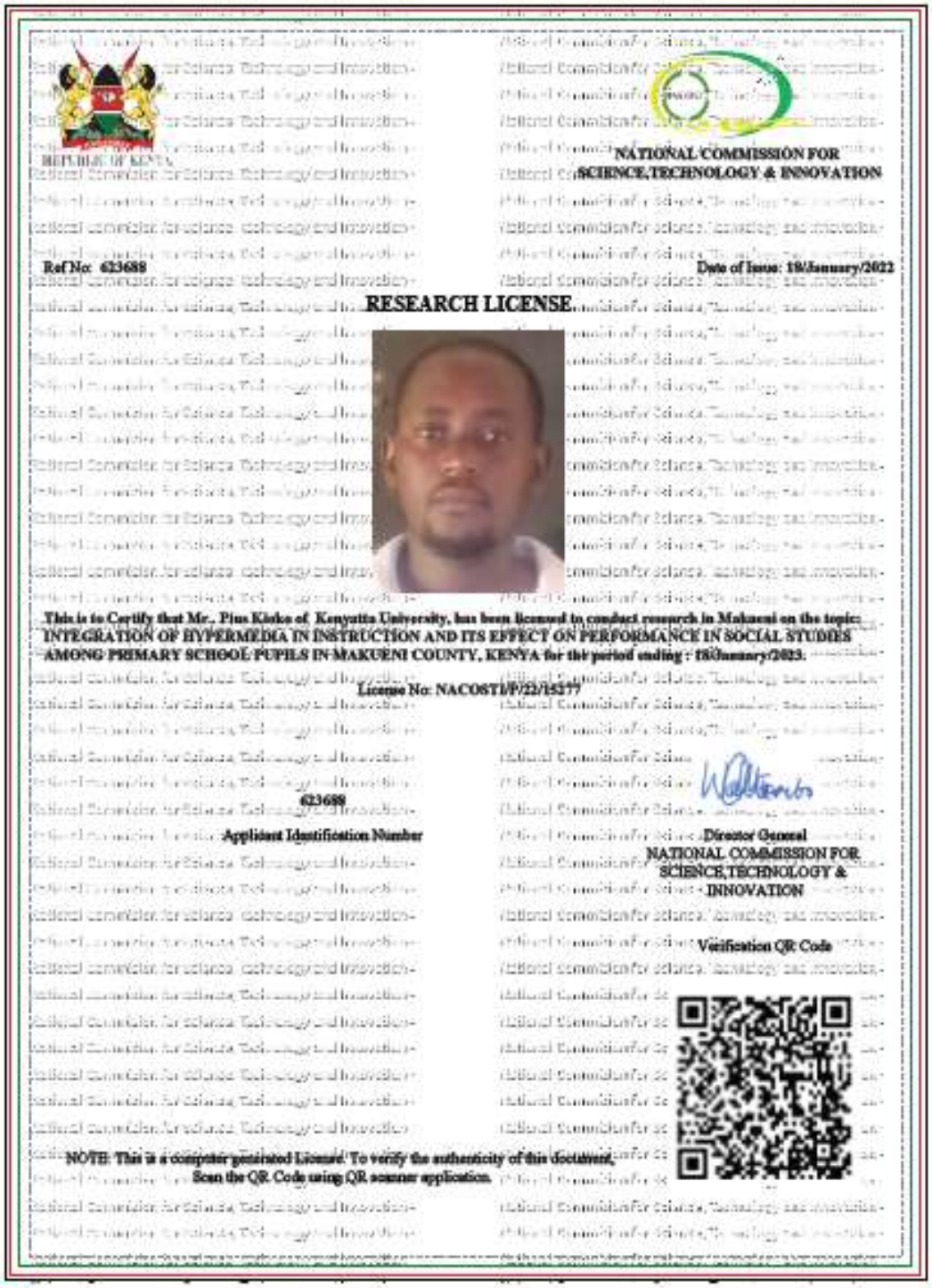
Mr. Wambua intends to conduct research for a M.Ed. thesis Proposal entitled, **"Integration of Hypermedia in Instruction and its Effect on Performance in Social Studies among Primary School Pupils in Makueni County, Kenya."**

Any assistance given will be highly appreciated.

Yours faithfully,

PROF. ELISHIBA KIMANI
DEAN, GRADUATE SCHOOL

Appendix XI: Research permit



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 623688

Date of Issue: 19/January/2022

RESEARCH LICENSE

This is to Certify that Mr., Pius Kioko of Kenyatta University, has been licensed to conduct research in Makueni on the topic: INTEGRATION OF HYPERMEDIA IN INSTRUCTION AND ITS EFFECT ON PERFORMANCE IN SOCIAL STUDIES AMONG PRIMARY SCHOOL PUPILS IN MAKUENI COUNTY, KENYA for the period ending : 18/January/2023.

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623688

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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Appendix XII: Hypermedia Content Website

https://somoplus.co.ke