LEARNING FOR TRANSFORMATION: THE IMPACT OF MULTIMEDIA DRAMA ACTIVITIES IN THE PRIMARY SCHOOL CLASSROOM

A DOCTOR OF PHILOSOPHY (Ph.D.) DISSERTATION

BY

IDOGHO, JOSEPH AGOFURE

(REG NO.: 2012107001F)

SUBMITTED TO:

THE SCHOOL OF POSTGRADUATE STUDIES
NNAMDI AZIKIWE UNIVERSITY, AWKA, NIGERIA

IN PARTIAL FULFILLMENT OF THE AWARD OF DOCTOR OF PHILOSOPHY (Ph.D.) DEGREE IN THEATRE AND FILM STUDIES

SUPERVISOR:

PROFESSOR CYPRIAN C. OBADIEGWU

APRIL, 2017.

CERTIFICATION

This is to certify that this dissertation by IDOGHO, Joseph Agofure with Reg. Number 201210700IF, has been read and approved of, as meeting the requirement for the award of a Doctor of Philosophy (Ph.D.) in theatre and films studies.

_____	_____
Prof. C. C. Obadiegwu Chief Supervisor	Date
_____	_____
Prof (Mrs.) T. C. Utoh-Ezeajugh Co-Supervisor	Date
_____	_____
Prof. Alex C. Asigbo H.O.D Theatre & Film Studies	Date
_____	_____
Prof. (Mrs.) T. C. Utoh- Ezeajugh Dean, Faculty of Art	Date
_____	_____
Prof. Ike Odimegwu Dean of Postgraduate School	Date
_____	_____
Prof. Henry Leopold Bell-Gam External Examiner	Date

DEDICATION

This Ph.D. dissertation is dedicated to all my teachers from whose cups of knowledge I have drank, and would still drink from my cradle to the grave.

ACKNOWLEDGEMENTS

I am eternally grateful to the Almighty God for His benevolence, protection, grace and guidance as I navigate through the vicissitudes, vagaries and hassles of life. I, most especially, appreciate God for granting me journey mercies in all my trips and for peace of mind to think right.

Indeed, without the help and understanding of many people, this dissertation would not have been finished. First, and foremost, I want to thank my supervisor, Prof. Cyprian Chiduo Obadiegwu for his valuable guidance throughout my stay in Nnamdi Azikiwe University, Awka. Your thoughtfulness and trailblazing efforts in this discipline birthed this dissertation. Words would not be enough for me to express my gratitude, Sir.

Worthy of note is my amiable and no-nonsense Second Supervisor, immediate past Head of Department and current Dean, Faculty of Arts Nnamdi Azikiwe University, Awka, Prof. (Mrs.) Tracie C. Utoh-Ezeajugh, whose knack for academic excellence and etiquette has always brought out the best in me. Same appreciation goes to all the members of the Departmental Postgraduate Board: Prof. C. A. Asigbo, the current Head of Department; Prof. (Mrs.) Tracie C. Utoh-Ezeajugh, Dean, Faculty of Arts; Prof. C. E. Nwadigwe, Prof. (Mrs) C. N. Abone, Prof. C.C. Obadiegwu; Associate Prof. C.C. Nwosu, the current P.G. Coordinator; Mr. D. N. Uwandu and Late Mr. E. E. Ebo for accepting me to be their doctoral student despite their overloaded work schedule and the distance. The Faculty P.G. Board Members whose comments helped to improve this work are worthy of mention, most especially Dr. (Mrs.) E. V. Ojukwu, my third supervisor from the Department of Music and all the members of academic staff and non-teaching staff members of the department. Your comments and constructive criticism helped put my work in the right path. Dr. N. C. Akas, Dr. G. I. Akunna, Dr. T. J. Okeke; C. L. Uwandu; S. O. Arinze-Umeobi; N. J. Aniukwu, Mrs. Ikenta etcetera. I am grateful to you all.

. Special thanks to you all for your knowledgeable comments and help to focus my thoughts; and for giving me the freedom and opportunity to write on interdisciplinary pedagogical theme. You are wonderful; may God bless you all madams.

My school mates and co-doctoral students in the department, both my predecessors and successors, Dr. Sam Okoronkwo, Dr. T. J. Okeke, Dr. (Mrs.) Arah Adaora, Dr. (Mrs.) Nkechi Okadigwe, Mr. Barnabas, Mrs. Joy Udeh-Achukwu, Mr. Emma Iroh and Mr. Sunday Edum, you all are indeed wonderful friends. May the Grace of God see us through all our endeavours.

I fully cherish and acknowledge the contributions of my most senior colleagues in the Department of Theatre and Media Arts (TMA), Federal University Oye Ekiti. Prof. R. O. Bakare, the pioneer H. O. D., (TMA) and current Dean, Faculty of Arts, Federal University Oye Ekiti; thank you sir, for your fatherly role and your contributions to my academic growth and success. Dr. B. O. Adeseye, my immediate past H. O. D., and Dr. O. T. Nasir my present H. O. D., I thank you

for your moral support and for vetting the instruments used in this research. Dr. J. D. Mbachaga, Mrs. L. E. Bakare, (my mother in Ekiti: *Migwo ma, we kobiruo evwero ete me*) Mr. Casidy Oyenmuchara, Mr. C. U Umenyilorah – my big brother thanks for been there financially and otherwise, Mr. M. A. Adeoye, Mr. N. B. Asuquo, Mrs. T. Tume, Mr. S. Balogun, Mr. Tayo Isijola, Mrs. O. Aneke, Mama Ilorin, Mr. Gondo Isaac, Mr. Unegbu Christopher, Mr. Edozie Okafor, Mr. Eme, Mr. Segun and Mr. Femi and non-teaching staff of the department: Mr. Omotoso Adekunle, Mrs. Oni Bukola, Mrs. Abiola Arinola, Miss Eguono Urhefe and every other members of the department whose names are not captured here, I am indeed grateful to you all. Your cooperation and assistance, at one time or the other, has led to my timely completion of this study.

Beyond my department, I extend my appreciation to Prof. A. A. Atere, the pioneer Dean of the Faculty of Social Sciences, FUOYE, Dr. Niyi Akingbe, the H.O.D of E.L.S. FUOYE, Mrs. Akinwunmi, Miss Amaechi Ada, Mr. Obinna Iroegbu, Dr. (Mrs) C. Agwu, Dr. Paul Onanuga; lecturers in the Department of English and Literary Studies, your prodding and proof-reading has yielded this fruit.

Mr. and Mrs Irikefe Clifford and family, my big bros in Asaba, thank you for housing me throughout my stay at UNIZIK. My very good friends Egedegbe Onoriode, who raised the fund for me to purchase the Ph.D. form five years ago, and Akahome Peter, doctoral candidate in Sociology, University of Ibadan, I thank you both. To my friends, colleagues, teachers and the entire department of Theatre and Mass Communication and Institute of Education, University of Benin, I say thank you for the foundation you laid and your continued support till date. I most appreciate your gesture of making available the departmental Library for my use.

Finally, most importantly and thoughtfully, my heartfelt thanks to my sweetheart, lovely and understanding wife and a career mother; Mrs. Agofure-Emoghene O. Margaret. She deserves much credit to have managed to live with me throughout this intense time of my life. I also thank her so much for taking care of the kids and for fixing numerous problems in the house on my behalf. Indeed you have been a tremendous help over the years, my physical pillar. I pray that you will reap the fruit of your labour to the fullest. I appreciate my kids: Elohor G. Agofure - my B. A. degree baby; Oghenetejiri V. Agofure - my M.A. degree baby; and the chairman of the house and Ph.D. degree baby, Agofure O. V. Joseph (Jnr) from whom I have always been absent, for their patience, love, and understanding throughout these difficult years. I say thank you my darlings. This dissertation is dedicated to you, guys!

ABSTRACT

This study investigates the inclusion of multimedia and drama activities in the curriculum, as an approach of promoting learners empowerment and transformation in the classroom and as an expansion of the Drama/Theatre in Education frontier. The research problem stems from the realization that, due to their short attention span, primary school pupils are easily bored with their subjects when taught with the traditional chalk-and-talk method of teaching. This study examines the effect and possible challenges of using Multimedia Drama Activities for teaching lower Primary pupils curriculum in Nigeria. The theoretical framework hinges on the Cognitive Theory of Multimedia Learning and the Socio-cultural Theory both of which expounds that people learn more deeply from words and pictures than from words alone; and through guided participation in social activity. The study adopts a mixed-method research methodology. Pre- and post-tests were constructed to measure pupils' achievement in Arithmetics and English Language. The population of the study comprised (60) Primary Two Pupils purposefully selected from University of Benin Consultancy Nursery & Primary School, Benin City, Edo State; St Peter's Demonstration Primary School Akure, Ondo State and SS Peter and Paul's Nursery and Primary Schools Oye- Ekiti, Ekiti State. These were divided into experimental and control groups. Thirty (30) students in the experimental group and (30) students in the control group spread across the aforementioned three schools. The experimental groups were taught using Educational Videos while the control groups were taught using the traditional chalk-and-talk method of teaching. Descriptive analysis was used for the pre- and post-tests of pupils' Arithmetics and English language test for the experimental and control groups. The finding of the study indicates that there were significant differences in the post-test between the control and the experimental groups in favour of the experimental group. The study therefore recommends that the kindergarten and primary school curricula be expanded and enriched to include multimedia aids as these facilitate learners' empowerment. In addition, Nigerian requires fresh perspective to the teaching-learning of the future generation; thus a shift from information transmission to real search and exploration through different media will only engender learners' transformation.

TABLE OF CONTENTS

Preliminary Pages

0.1 Title Page.....i

0.2 Certification.....ii

0.3 Dedication.....iii

0.4 Acknowledgements.....iv

0.5 Abstract.....vi

0.6 Table of Contents.....vii

Chapter One: Introduction

1.1 Background to the Study.....1

1.2 Statement of the Problem.....8

1.3 Aim of the Study.....9

1.4 Significance of the Study.....10

1.5 Scope of the Study.....11

1.6 Research Question.....12

1.7 Hypothesis.....12

1.8 Research Methodology.....12

1.8.1 Design of the Study.....12

1.8.2 Area of Study.....13

1.8.3 Population of the Study..... 13

1.8.4 Sample and Sampling Technique.....14

1.8.5 Instruments for Data Collection.....14

1.8.6 Validation of the Instruments.....16

1.8.7 Reliability of the Instruments / Pilot Study.....16

1.8.8 Method of Data Collections.....17

1.8.9 Method of Data Analysis.....18

Chapter Two: Literature Review.....19

2.0 Introduction.....19

2.1 Conceptual Framework.....19

2.2 Theoretical Framework.....24

2.2.1 Cognitive Theory of Multimedia Learning (Mayer).....25

2.2.2 Socio-Cultural Theory and Drama in Education.....27

2.3 Existing Framework on Learning through Multimedia.....31

2.3.1 Principles of Thinking and Learning.....33

2.4 Empirical Review.....50

2.4.1 Multimedia in Education: an Overview.....50

2.4.2 The Role of Multimedia Drama Activities in Learning.....66

2.4.3 Research Evidences of Learning through Educational Video and Television.....87

2.4.4 Parallel Developments in 20th C. Education and Drama/Theatre and Multimedia Involvement.....95

2.4.5 Planning Educational Television and Video for Classroom Learning.....101

2.4.6 Empowering and Inhibiting Elements of Learning in Multimedia Usage in Teaching.....106

2.5 Summary of Literature Review.....110

Chapter Three: Presentation of Data

Description of Multimedia Drama Activities Workshops Strategies and Experience

3.1 Background Preparation and Instruments Descriptions.....112

3.2 The Workshops Strategy/Description of the Programme.....115

3.3 Clarification of the Lesson Format.....118

Chapter Four: Data Analysis and Discussion of Findings

4.1 Teachers' Opinion on the Use of Multimedia Drama Activities Videos as Teaching Aids.....123

4.2 Pupils' Opinion on the Use of Multimedia Drama Activities Videos as Teaching Aids.....125

4.3 Discussions of Findings/Results.....127

4.4 Advantages and Disadvantages of Multimedia Drama Activities in Education.....129

4.5 Dramatic Activities that Stimulates Youngsters Learning in the workshops.....134

4.6 Rationale for Integrating Dramatics Activities Educational Video into the Curriculum...147

4.7 Conditions for Planning/Forming Multimedia Educational Material.....154

4.8 Rationale for Using Multimedia Teaching Aids and as a Mode of Teaching and Learning.....156

Chapter Five: Summary, Conclusion and Recommendations

5.0 Introduction 161

5.1 Summary of Findings 161

5.2 Conclusion.....163

5.3 Recommendations.....167

5.4 Suggestions for Further Studies.....168

Works Cited.....170

Appendixes.....177

Appendix I: Samples of Approval Letters from the Experimented Schools.....177

Appendix II: Instruments Validation Forms vetted by Experts.....180

Appendix III: Sample of Pre / Post-Tests used in the Study.....183

Appendix IV: Sample of Questionnaire on Teachers Perceptions' on the Programme.....187

Appendix V: Photo Album ; Cross-Session of Activities from the Practical Workshops.188

Lists of Tables and Figures (Diagrams)

Lists of Tables

Table 1: The Sample of Population Distribution.....14

Table 2: Learning Theories, Theorists and Description.....46

Table 3: The Classification of Media in Teaching.....56

Table 4: Selected Popular Television Programs and DVD Series for Young Children's Learning.....65

Table 5: Empirical Multimedia Results and Applications.....86

Table 6: The Research Evidence of the Impact of Sesame Street on Children.....90

Table 7: Research Evidence on Learning with Music.....93

Table 8: Planning Multimedia into the Primary Schools Curriculum.....105

Table 9: Clarification of the Lesson Format for the Programme.....118

Lists of Figures (Diagrams)

Figure 1: Types of Teaching Media.....54

Figure 2: Model of Memory and Learning as a Way of Information Processing.....73

Figure 3: Processing of Pictures, Spoken and Printed Words.....76

Figure 4: Mayer's Cognitive Theory of Multimedia Learning.....81

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background to the Study

The proposition that children are often bored during lessons on certain subjects has been validated by some researchers and educators. While the individual subjects are themselves not inherently boring, the way they are presented may be boring to children. The problem may lie with the highly proliferated 'chalk and talk method' of teaching in which textbooks, short stories, and articles are read to teach and learn about different subjects in school. Employing this method specifically as a way of teaching young children makes them retain just a little of what they are taught. Ashley Shear posits that, "students can become bored with a subject quickly with the traditional chalk-and-talk method of teaching... For young children, with their high exposure to current technology, listening to one person all day can be boring." (7). However, an observation of children watching the educational television series called *Barney and Friends* and *Super Kids* as teaching and learning tool in the classroom revealed an entire reversal of experience. These programmes use fictional characters and puppets to teach arithmetic and alphabets for reading and writing purposes. As these programmes employ relatable and fun characters, viewing this television programme in the classroom environment excites pupils and learning is easily equated to fun. This practical experience engendered the present research which seeks to examine the impact of multimedia educational programmes on classroom learning.

Education is naturally expected to 'spark' students' interest and inspire them to learn independently. It should also help them take pride in their accomplishments; not locking them up in ignorance. The implication is that educational experience must be engaging and stimulating for the learners. It must also challenge them with authentic learning experiences,

encourage them to work in team, and motivate them to seek, integrate and create knowledge. Most importantly the love for learning must extend to all aspects of life and through life.

The skills and competencies of the teacher are integral to the stimulation of learning. However, education and learning should be constructed to be learner-centred, as against the teacher-centred traditional model of teaching. It must be observed that the first few years of a child's life (0-7 years) are the most impressionable years and the learning experiences provided during these years in or outside schools and other institutional arrangements have a predominant influence on the future behavioural pattern of the child. Seeing, hearing, touching, smelling and manipulating things in the environment tell the child what the world is like. Sensory experiences of all kinds contribute to strengthen and enrich the child's perception. Toys, building blocks, card-games, puzzles as well as audio-visual aids such as pictures, charts, maps, globes, diagrams, flannel-graphs, sound recordings, which appeal to sight and sound, stimulate the senses and promote self-activity in children. These audio-visual aids also reinforce the spoken or the written words with concrete images and thus provide rich perceptual experiences which are the basis of learning.

A visual presentation of an idea or a concept using pictures helps children to develop mental images of the object under discussion. A mere verbal presentation or a lecture may not serve this purpose in children. Visual presentations add variety to teaching and break the monotony of verbalization in classroom instruction. An old Chinese proverb says: "If I hear, I forget; if I see, I remember; if I do, I understand" (Corporation for Public Broadcast: 4). Seeing and hearing together yields more results and is more effective in children than just hearing. The child gets bored with words but loves to look at pictures of different kinds presented before him. Today, a primary school pupil is required to learn increasingly complex information and skills in a highly complicated world. James (6) asserts that "research has shown that 80% of learning occurs through the sense of sight and hearing and, therefore

planned use of audio visual aids which are essentially materials of sight and sound, help to improve learning and teaching". This important principle is the basis for the use of audio-visual aids in educational activities.

According to a summary of current research and educator surveys, educational television and video possesses the following qualities:

I. Reinforces reading and lecture material
II. Aids in the development of a common base of knowledge among students
III. Enhances student comprehension and discussion
IV. Provides greater accommodation of diverse learning styles
V. Increases student motivation and enthusiasm
VI. Promotes teacher effectiveness. (Corporation for Public Broadcast 6)

Mayer explains that viewing, while it may appear to be passive, involves high cognitive activity necessary for active learning and that "well-designed multimedia instructional messages can promote active cognitive processing in students, even when learners seem to be behaviorally inactive" (19). The content and context of the viewing are both crucial elements for engaging students as active learners. Content should be age- and skills-appropriate, as "the content one watches may be a truer determinant of future academic success than the amount of time one spends watching television" (Stanovitch & Cunningham, cited in CPB 8). Other aspects of video that have been demonstrated to engage students in active learning are its address to multiple mode of learning – audio, visual and tactile – and its use of multiple modes for content delivery, and its emotional appeal to viewers.

According to Gardner's *Multiple Intelligences Theory*, an individual possesses, in varying strengths and preferences, at least eight discrete intelligences: linguistic, logical, mathematical, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal and naturalistic (Gardner, 16). "The relative strengths and weaknesses among and between these intelligences dictate the ways in which individuals take in information, perceive the world, and learn" (Marshall, 8). This represents a great departure from the traditional view of intelligence, which recognizes only verbal and computational ability. Gardner's theory of multiple intelligences is

just as applicable as Piaget's theory. Learning should not only take place in correlation with the cognitive, Piaget's oriented tasks, but should also involve all the human senses. Gardner's theory of *Multiple Intelligences* aimed at involving multiple sensory experiences during the learning process.

Prior to an introduction of Gardner's *Theory of Multiple Intelligences*, the concept of learning through the senses finds expression in Piaget's theory. This theory and that of Gardner merge, for both set out to stimulate holistic learning. In fact, Gardner's multiple intelligences encourage learning through the senses. Learning through the senses is not only part of a cognitive development stage, which Piaget identified as the sensory-motor development stage, experience and sensations are learning. According to Le Doux, "we see, hear, and smell the world with our visual, auditory and olfactory systems" (16). Le Doux explains that the word "perception" indicates, in a general way, how a number of neural systems evolved to face survival challenges for animals and human beings. No single area in the brain is reserved for perception, in the same way as there is no specific area allocated to emotion. Feeling and perceiving are integrated tasks, executed by the whole brain. In other words, the whole brain is involved in the perceiving, imagining and thinking processes.

Certain areas of the brain are more specifically involved with some functions than others, but one should not oversimplify any of the workings of these processes. Teele explains this clearly viz: "the brain operates as an intricate, interconnected system; recent findings suggest that the brain's organization can be viewed in a modular way, rather than in a hierarchical sense …" (15). This implies that the body is a sensory receptor which gathers information constantly to enable us to survive. The ears, nose, and eyes are sensory organs, which with the skin and its touch receptors, form images of the world and us.

During the middle childhood period – 7-12 years – the world is discovered holistically. Gardner's theory as subsequently explained implies whole-body and whole-brain learning, which includes sensory learning. As indicated, Campbell, Campbell and Dickenson based a

whole curriculum on Gardner's theory of multiple intelligences in order to create an open system of education which makes it possible for the human mind to flourish. According to Campbell, Campbell and Dickenson, "everyone relies on one or more inherent intelligence preferences. Four of the eight intelligences are "object related" namely logical (mathematical), bodily (kinesthetic), naturalist and spatial. The object-free intelligences are verbal (linguistic) and musical" (xxiii). The third section is "person-related" namely inter- and intrapersonal intelligences" (Campbell, Campbell and Dickenson xxi). The multiple intelligence theory is a whole-brain approach that involves all the learner's faculties when stimulated by learning material.

Gardner believes that the eight intelligences are independent since they grow in dissimilar ways in different people. These intelligences are closely intertwined and many educationists observe that when an individual grows to be more capable in one area, the whole group of intelligences may be improved. This could motivate one to support children to implement and discover all of their intelligences. These four intelligences – verbal (linguistic), visual (spatial), bodily (kinesthetic) and musical – integrate well with educational videos and television and as well as creative drama programmes.

Gardner's theory suggests that the manner in which a subject matter is conveyed will influence an individual's ability to learn, and that teachers need to take all of these intelligences into account when planning instruction. While traditional textbooks often take a primarily linguistic approach to learning, multimedia modes can take a variety of approaches, such as aesthetic, logical or narrational, in addition to linguistic, thus addressing the needs of a broader range of learners: "these 'multiple entry points' into the content are especially valuable in a formal educational setting, as they offer greater accommodation to the multiple intelligences of a diverse group of students" (CPB 7).

Furthermore, there are three widely accepted types of learning styles: aptitude-based, which draws on Gardner's theory of multiple intelligences; personality-based, measured by

using the Meyers-Briggs test; and sensory-based, which looks to the modalities through which students take in information (Pruitt 2). What these conceptions of learning styles express is the need to expand instruction beyond single modes of instructions.

Scholars have identified three primary modalities through which people take in information: visual, auditory and tactile. Silverman relates these three modalities to how students process information, deriving three basic learning styles: visual-spatial, auditory-sequential and tactile-kinesthetic (71). Visual-spatial learners take in new information through visualization of the whole concept and think in holistic, often three-dimensional, images. Auditory-sequential learners, by contrast, think in words, processed auditorally, and generally learn in a sequential, step-by-step process. Finally, tactile-kinesthetic learners take in information through physical touch and sensation, and they benefit from demonstration or application more than from verbal explanations. Thus, the benefit of video, where much of the content is conveyed visually for visually-oriented learners is immediately apparent (CPB 7). However, multimedia also benefits auditory learners, with its inclusion of sound and speech, and can provide visual demonstration not otherwise possible in classrooms for tactile learners.

In fact, all students, both with and without a strongly dominant modality preference, benefit from instruction that includes video. Marshall cites the conclusions of Dale's "Cone of Experience," that: people will generally remember:

> 10% of what they read
> 20% of what they hear
> 30% of what they see
> 50% of what they hear and see". (7-8)

Therefore, Educational Television and Video as a form of multimedia conveys information through two simultaneous sensory channels: aural and visual. It often uses multiple presentation modes, such as verbal and pictorial representations in the case of on-screen print and closed-captioning (Mayer 12). This multiplicity means that video communicates the same

information to students through simultaneous learning modalities and can provide students with "multiple entry points" (Gardner 8) into the content. This is further discussed thus:

> The richness of these forms of information [images, motion, sound, and, at times, text] benefits learners, by enabling them "…to learn through both verbal and visual means, to view actual objects and realistic scenes, to see sequences in motion, and to view perspectives that are difficult or impossible to observe in real life" …Most researchers agree that "…when viewed together, each source provides additional complementary information," thus increasing the chances that comprehension will take place. (CPB 5)

Wood noted that educational videos can be use "to promote awareness of the interrelationship between modes (picture, movement, sound, and captions)" (cited in Aiex 2). Kozma reiterated the observation that the mix of spoken language, text, still images and moving images in television and video results in higher learning gains than media which rely primarily on only one of these symbol systems (182). Thus, a review of research in Educational Televisions and Video concluded that combining sound with either still or moving images resulted in more learning than simply adding motion to still images. Corroborating this position, Ogunmilade notes that: "... through instructional television, the learner is considered the central figure; he is recognized as a reasoning human being and therefore treated as a rational participatory rather than as a passive receptor of impression" (63).

It is against this background that this study explores the theory and research supporting the educational use of multimedia aids in learning by analyzing *Love Kids English Teaching*, *Nice Kids* and *Children Mathematics Learning Collections* produced by Francisca Dike and Eyakwaire Benson respectively as a teaching tool for classroom environment. Unless otherwise stated, Multimedia Drama (MD) and Educational Television and Video (ETV) are used interchangeably in this study to refer to *Love Kids English Teaching*, *Nice Kids* and *Children Mathematics Learning Collections* (Videos) and these are multimedia drama meant to teach curriculum content in schools, whether delivered by Television, VCR, DVD or Projector-digitally.

1.2 Statement of the Research Problem

The need to stimulate pupils' interests as well as the limited amount of time to disseminate information from texts loaded with verbose contents are part of the daily hurdles of teachers at that level of education. Coupled with these is the realization that pupils in lower primary school classes often become bored with a subject easily, particularly when they are taught with the traditional chalk-and-talk method of teaching the curriculum content. The prevalent traditional chalk-and-talk method of teaching exposes pupils to auditory and partial visual learning modalities, which in most times result to rote learning. While this traditional model is essentially textual and its presentation linear, modern teaching and learning practice has been modified and enhanced to include at least three basic learning modalities (auditory, visual, and tactile). The chalk-and-talk method is essentially modeled on the behavioral learning perspective in which the teacher controls the instructional process and is regarded as the source of expert knowledge, which is communicated to the students through lectures in a classroom environment. The teacher decides how much information is to be delivered to the learners, while the students remain as the passive and obedient recipients of knowledge and information and play little part in the learning process.

The introduction and use of multimedia platforms and audio-visual technologies such as Television, VCR and Projectors implies that multiple media can now be used in presenting the instructional materials and delivered in a multi-modal environment. This enables the learners to interact with the content using the learning mode suitable to them. The presentation is non-linear and fosters a two-way communication or interaction between the learner and the teacher. Learning can thus take place at the learner's own pace, depending on the learners' interest and assimilation rate. This mode of learning is student-centered or self-directed

learning, which will cater for individualistic needs in learning unlike the chalk-and-talk method that is teacher-centred or directed instruction mode.

Accordingly, in learning numbers, arithmetic, and alphabet, reading and writing which fall within the aim and objective of both Nursery and lower Primary Schools curriculum, pupils need to internalize ideas using their most suitable learning mode. They need the abstract brought to the concrete level for understanding. The use of math and alphabets presented dramatically via television, VCR and projector can be a method to help learners accomplish this. Learners thus become active participants in their own learning and formation of idea concepts. Multimedia can be used to teach different modalities at the same time, thus reaching a larger percentage of pupils during instruction. This research study therefore is a comparative study of the traditional chalk-and-talk method and the Educational Videos using *Love Kids English Teaching* and *Children Mathematics Learning Collections* (Videos) as classroom learning tools. The study further highlights the impact of the latter on the learners/participants when used in the classroom learning environment.

Thus the gap of knowledge identified and bridged by this study is the chasm in the teaching methodology adopted by early childhood educators and care-givers specifically in government-owned Nursery and Primary schools in Nigeria, The research examined an alternative teaching method – Multimedia Drama Activities integrated with Interactive Learning Module (ILM) – for early childhood educators and care-givers in Nigeria schools.

1.3 Aim and Objectives of the Study

The totality of learner empowerment for transformative learning framework was developed as a way to address the centrality of learners in education. Its principles are pertinent to teaching students in any situation where they are not aware of the impact that they can have on their environment, or where their common educational experiences do not serve to empower them. However, in spite of learner empowerment framework in contemporary education, its

effectiveness in the Nigerian milieu is arguable due to the teaching methodology adopted within the education system. This makes students mere recipients of knowledge rather than active participants in knowledge creation.

The overall aim of this research is an investigation of the impact of multimedia drama activities integrated with the Interactive Learning Module (ILM) on learning in Nigerian Primary school education. From the teachers' perspective, this study is interested in technologies that can easily supplement the textbook; while for the students, the study examines how educational videos can enhance their learning in the classroom environment.

The specific objectives of this research are:

i. to investigate the form(s) of multimedia drama activities integrated with Interactive Learning Module that would be relevant in classroom teaching and learning process;

ii. to devise ways to create lessons around educational television programs;

iii. to determine the benefit(s) of integrating multimedia in classroom teaching;

iv. to identify the reason(s) of not integrating multimedia in classroom teaching; and,

v. to identify the limitation(s) of integrating multimedia in classroom teaching.

1.4 Significance of the Study

This research finds significance in its integration of multimedia drama activities into the classroom teaching and learning process. Firstly, this research contributes to education and teaching because the 21st century primary school teachers have to accept the fact that teaching is no longer confined to the four walls of their classrooms and that the traditional chalk-and-talk method is gradually becoming outdated. The reality is that teaching has gone beyond teachers assuming an authoritarian status of delivering knowledge. The Nigerian education system has only just begun to explore the potential of information and communication

technologies. However, judging by the noteworthy impact the integration of technology in teaching-learning has had in other climes, the Nigerian education system will no doubt benefit from the use of such technology to afford children limitless learning.

In addition, the integration of multimedia drama activities into the classroom can increase primary teacher trainees' awareness towards the benefits of using the technology. One of the indisputable advantageous of the integration of multimedia drama activities is that it can cater to students' learning preferences as it incorporates the five elements of multimedia into teaching: text, audio, graphic, animation as well as video. Thus, by incorporating multimedia into the classroom, students' learning styles and needs are fulfilled simultaneously.

The government can use the result of this study to improve teacher training programmes so that more emphasis can be put on equipping the teacher trainees with the right knowledge of technology, specifically multimedia so that classroom learning will be an interesting and challenging experience for the pupils.

1.5 Scope of the Study

This study explores the impact of Multimedia drama (Educational Drama Videos) and Interactive Learning Module (ILM) that contain music/songs, mime, simulation, role-play, poems, graphics, and puppets/animation to teach Primary Two curriculum in the Nigerian classroom environment. To achieve this, this research integrates Multimedia Drama packages – *Love Kids English Teaching*, *Nice Kids English Teaching* and *Children Mathematics Learning Collections*. These Educational Drama Videos are used in the Kindergarten and the lower Primary school curriculum. Three Government Nursery and Primary Schools are selected from three States namely: University of Benin Consultancy Nursery & Primary School, Benin City, Edo State; St Peter's Demonstration Primary School Akure, Ondo State and SS Peter and Paul's Nursery and Primary School, Oye- Ekiti, Ekiti State. The experimental group participants learned through the Multimedia Educational Drama Videos whereas the

Controlled group participants learned through the chalk-and-talk method in each of these schools. This was geared towards ascertaining the impact of Multimedia Drama in classroom learning environment.

1.6 Research Question

Are there any benefit(s) of integrating multimedia in teaching the Primary two pupils in their classroom (using multi-media drama activities integrated with Interactive Learning Module (ILM))?

1.7 Hypothesis

There are significant differences between the Primary Two pupils' performances in Arithmetic and English Language, due to the teaching strategy they are exposed to (using multi-media drama activities integrated with Interactive Learning Module (ILM).

1.8 Research Methodology

Experimental and descriptive research design was employed to satisfy the objectives of this study. Since the aim is the investigation of the impact of Multimedia Drama Activities on Primary Two pupils, this design accommodates the generalization of the findings of the study on the target population from which only a representative portion was actually studied.

1.8.1 Design of the Study

The research design for this study is experimental; the participants of the study were divided into two groups, experimental and control. The participants in the experimental group were Primary Two pupils who were taught arithmetic and English language using Multimedia Drama Activities integrated with Interactive Learning Module (ILM) Approach for (6) weeks while the control group participants were taught using the traditional method for the same

duration. A pre-test was conducted on both groups to test their entry behaviors. The same test was administered as a post-test after applying the treatment to see whether the using of Multimedia Drama Activities integrated with Interactive Learning Module (ILM) Approach for teaching Primary Two Pupils Arithmetic and English language had any influence on the experimental group.

The questions as presented in the post-test were the same pre-test questions dispersed from their original numbers and positions. This was to neutralize and erase the effects of the pre-test on the participants. The time interval between the pre-test and the post-test was (8-10) weeks; a period long enough to minimize the effect of the pre-test on the results and conclusions of the experiment.

1.8.2 Area of Study

This research was carried out in Edo State located in the South-South geopolitical zone of Nigeria, and Ondo and Ekiti States located in the South-West geopolitical zone of Nigeria respectively. These locations were selected because they fulfilled the necessity of proximity. These locations are within the same axis and close to the base of the researcher.

1.8.3 Population of the Study

The target population of this study is the entire lower primary school pupils in Nigeria (between Primary One – Three). However, the population of respondents comprised sixty (60) Primary Two pupils altogether, with twenty (20) - ((10) pupils for the experimental groups and (10) pupils from the control groups) Primary Two pupils purposefully selected from each of University of Benin Consultancy Nursery & Primary School, Benin City, Edo State; St Peter's Demonstration Primary School Akure, Ondo State and SS Peter and Paul's Nursery and Primary Schools Oye- Ekiti, Ekiti State.

Table 1: The Sample of Population Distribution

S/n	Schools	Experimental Group	Control Group	Total
1.	SS Peter and Paul's Nursery and Primary School, Oye Ekiti, Ekiti State	10	10	20
2.	St Peter's Demonstration Primary School, Akure, Ondo State	10	10	20
3.	UNIBEN Consultancy Nursery and Primary School Benin City, Edo State	10	10	20
	Total	30	30	**60**

1.8.4 Sample and Sampling Technique

The sample of the study comprised sixty (60) Primary two pupils - twenty (20) from each school selected from three schools across three states in Nigeria: University of Benin Consultancy Nursery & Primary School, Benin City, Edo State; St Peter's Demonstration Primary School Akure, Ondo State and CAC Nursery and Primary Schools Oye- Ekiti, Ekiti State. The sampling technique employed was the purposive sampling technique. The purposive sampling techniques were done by liaising with the class teacher to choose the best ten (10) pupils from the selected class. In other words, the academic performances of the pupils were used as criteria for the sampling.

Furthermore, the researcher's selection of schools in each state was based on proximity to the Local Government Education Authority (LGEA). This was because the Head Teachers of the schools insisted that the Local Government Education Authority (LGEA) officials must be intimated with the study. Thus the LGEA Officials visited during the experiment to evaluate the programme impact on the participants.

1.8.5 Instrument for Data Collection

Two strategies were used for teaching Primary Two pupils Arithmetic and English language. These are the Multimedia Drama Activities Approach integrated with Interactive Learning Module (ILM) and the traditional chalk-and talk method. A test was also designed based on the instructional material from the pupils' Arithmetic and English language books. Validity and

reliability were ensured in the data collection. Both groups – the experimental group as well the control group – were taught by their teachers. The subjects in both groups took a pre-test to determine their actual level before starting the experiment, and the same test was administered as a post-test at the end of the experiment to assess subjects' achievement. In the post-test, the questions presented were dispersed from their original numbers and positions; making it different from the pre-test. The time interval between the pre-test and the post-test was 8-10 weeks.

Three data collection instruments were used in this study. Before exposure to learning with Multimedia Drama Activities integrated with Interactive Learning Module (ILM), pupils' prior knowledge to the lesson was accessed by using pre-test. After the students learned through the ILM, a post-test was conducted to identify the students' learning outcomes from this learning environment. In addition, after the students had learnt through ILM, a 5-point Likert scale questionnaire with 20 survey items was administered to the experimental groups' teachers. This was to identify the change of student attitude by measuring the level of agree response with each survey item. The analyses of teachers' perceptions are arranged in six categories: 1 - learner-centred environment; 2 - use of multimedia; 3 - understanding of content; 4 – motivation; 5 - content organization; 6 - availability of feedback. Thirdly, 10 open-ended questions were used to collect adjudicators' opinion and suggestions with regard to their perception of Multimedia Drama Activities integrated with Interactive Learning Module (ILM). All these qualitative and quantitative data were analyzed accordingly.

1.8.5.1 Instructional Materials

The instructional materials for this study were *Love Kids English Teaching*, *Nice Kids English Teaching* and *Children Mathematics Learning Collections*. These Educational Drama Videos contain music/songs, mime, simulation, role-play, poems, graphics, and animation which are learning contents for Nigerian Primary Two pupils' arithmetic and English language texts.

1.8.6 Validation of the Instrument

The instrument was validated by three adjudicators/experts in related field of study: (1) Prof. (Mrs) R. O. Olubor – a Professor of Education Planning of the University of Benin, Benin City; (2) Prof. (Mrs) J. N. Mokwuyen – a Professor of Theatre Arts/Music with cognate experience in Drama/Theatre-in-Education/Children Theatre, from University of Benin, Benin City and (3) Dr Bifatife O. Adeseye – a (Ph.D.) holder and Reader in Theatre, Media and Animation from Federal University, Oye Ekiti, Ekiti State. The referees completed a Validation Form, which is attached to the bibliography section of this study. The validation form is in Appendix 2.

The outcome of the validation exercise was positive. The three adjudicators agreed and approved the instructional materials as being appropriate for the purpose of the study. They were found as viable learning tools that could facilitate learning. Adjudicator One and Two commented that the music was a little loud and this was corrected in the fieldwork.

1.8.7 Reliability of the Instrument

To ensure the test reliability, the researcher followed test-retest technique. A pilot sample was conducted on twenty (20) Primary Two pupils of Christ Apostolic Church Nursery and Primary School Oye-Ekiti, Ekiti State: who were never part of the main experiment – ((10) pupils for the experimental groups and (10) pupils from the control groups; making it the total of (20) pupils who were used for the pilot study).

Pilot Study

A pilot study was conducted before the actual data collection in order to ensure the validity of the result of the study. The respondents and their class teacher were briefed on the objectives of the research. This was to ensure their full cooperation to achieve the validity and reliability of the study. Focus Group Discussion on "**Drama Activities Educational Video and**

Television Intervention Programme for Classroom Environment" was achieved. Copies of a questionnaire were distributed to the teachers involved and the respondents were required to respond to it. The questionnaires were collected on the same day. The purpose of briefing, distributing and collecting the questionnaires on the same day was to assist respondents who may have difficulties in interpreting and completing the questionnaire with ease. This assisted in reducing the possibility of not retrieving the copies of the questionnaire administered.

1.8.8 Method of Data Collection

Data collection was achieved through pre- and post-tests for Arithmetic and English language which were designed for both the experimental and control groups. The multimedia package – *Nice Kids- English Teaching* by Francisca Dike – was taken from the Nigerian Primary Two Pupils Arithmetic and English language books and integrated with the Interactive Learning Module (ILM) approach. In addition, a questionnaire was administered to the experimental groups' teachers to elicit responses to the research question.

The Primary Two Pupils were exposed to instructional materials – *Nice Kids- English Teaching* and *Love Words* by Francisca Dike and Eyakwaire Benson respectively. The pupils watched the videos for the purpose of learning and thereafter the class teachers interacted with them on what they had learnt. The pupils were further questioned so as to examine their level of assimilation through this medium of teaching and learning. At the end of the six (6) weeks programme, questions – captured in Chapter Four (4) of this study – were designed to provide insight into the pupils perceptions of teaching Arithmetic and English language through multimedia drama activities integrated with the interactive learning module (ILM) approach, in the Primary Two Classroom.

Finally, a structured questionnaire (See Appendix 4) was used to identify the teachers' perceptions on teaching Arithmetic and English language through multimedia drama activities integrated with the interactive learning module (ILM) approach.

1.8.9 Method of Data Analyses

Descriptive data analysis was used in analyzing the data gathered from this study. Themes were identified and data were analyzed under each theme accordingly.

CHAPTER TWO
LITERATURE REVIEW

This chapter reviews existing literature relevant to the concepts that are central to the present study. The review assists in identifying the perspectives of existing studies and how the current work is different. The presentation in this chapter is organized in the following sections:

(i) Conceptual Framework

(ii) Theoretical Framework

(iii) Empirical Review

2.1 Conceptual Framework

In order to provide mutual and clear understanding of the concepts involved in this study, it is important that key terms in the study are adequately defined, especially within the context of their application in the study. This is realized below:

Learning: In psychology and education, "learning is commonly defined as a process that brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing, or making changes in one's knowledge, skills, values, and world views" (Illeris 34). Learning is experiential and this experience could be derived from dramatic activities. "Learning produces changes in the organism and the changes produced are relatively permanent" (Vygotsky 29). Vygotsky sees learning "as a process of acquiring new or modifying existing knowledge, behaviours, skills, values or preferences and may involve synthesizing different type of information" (38). Learning is not automatic, it is contextual. It does not happen all at once, but builds upon and is shaped by what we already know. Thus learning may be viewed as a process rather than a collection of factual and procedural knowledge. In a similar vein theatre and dramatic activities are a process and could induce learning in participants.

Basically, human learning could occur as part of education, personal development, schooling or training. It may be goal-oriented and may be aided by motivation. Learning may occur consciously or without conscious awareness. Learning may occur as a result of habitation or classical conditioning seen in many animal species or as a result of a more complex activities such as play, which is creative drama oriented. However, learning as used in this research is the process of knowledge acquisition that provides meaning making that involves personal experiences, dreams, fantasies and individual specificities; that gears towards permanent change of attitudes. Learning tasks help in building links between printed information and experience. The learner uses his/her own perspective to relate to the world and enters the imaginative reality of information thus expanding narrow visions and perceptions acquired in the learning process. Instead of learning to accept the world as pre-given, the learner learns that he/she can create his/her own world through action and in an imaginative fashion.

Transformative Learning: is defined "as learning that induces far-reaching changes in the learner than other kinds of learning, especially learning experiences which shape the learner and produce a significant impact, or paradigm shift, which affects the learner's subsequent experiences" (Clark 47). However Transformative Learning as used in this study implies learning that goes beyond just content knowledge acquisition, or learning equations, memorizing or learning historical facts and data. It is a desirable process for learners to learn to think for themselves, through true emancipation from sometimes mindless or unquestioning acceptance of what we have to come to know through our life experience. Transformation implies to change the frame of reference of the learner through experiential learning/discovery learning. In other words, learners can be transformed through experiential learning and problem-solving activities in a classroom learning situation.

Empowerment: This is the gaining of power in particular domains of activity by learners or groups of individuals and the processes of giving power to them, or processes that foster and facilitate their taking of power. According to Nederveen Pieterse, "empowerment as a transformation in the individual's self-definition and his or her participation: a result of which may be change even in the social structures of subordination" (10). Livingstone highlights three factors as indicators of empowerment. These are "the expansion of a person's world-view or cultural understanding, the strengthening of one's 'voice' in discourse, and the broadening of the field of social identities or roles" (19).

Empowerment concerns the individual's growth of confidence not only in expression, but also a personal sense of power over the creation and validation of knowledge. This is a personal form of empowerment: the development of personal identity so as to become a more personally empowered person with growth of confidence and potentially enhanced empowerment in all the three domains: cognitive, affective and psychomotor and as well as the learning skills (listening, reading, writing and speaking).

However, empowerment as used in this scholarly research implies the expansion of the learner's world-view, cultural understanding, the strengthening of their 'voices' in discourse, and the broadening of their field of social identities or roles through the integration of the learner's mind, body, and spirit in the teaching and learning process. This means that students are intellectually, socially, physically, and emotionally engaged with the content of the course, with the teacher, and with fellow students.

Multimedia: Multimedia could be defined as "the combination of various digital media types such as text, images, sound and video, into an integrated multi-sensory interactive application or presentation to convey a message or information to an audience" (Agnew et al 18). In other words, multimedia could mean an individual or a small group using educational videos to interact with information that is represented in several media, by repeatedly selecting what to

see and hear next. Agnew et al further defines "multimedia" as "using, involving, or encompassing several media" (19). Mayer conceptualizes multimedia across three areas: "delivery hardware (i.e., computer screen, audio speaker, or television), presentation mode (i.e., words and/or pictures), and sensory modalities (i.e., auditory or visual)" (15).Multimedia offers exciting possibilities for meeting the needs of 21st century learners. Multimedia learning can be defined in a number of ways.

However, in this study, multimedia is defined as delivery hardware (i.e. projector, television and videos – VCR/DVD) and as the delivery of instructional content using multiple modes that include visual and auditory information which are used by students to construct knowledge.

Drama Activities: Drama Activities include among others mime; role play; simulation; improvisation; movement; music, drama exercises and games. Generally, it has been proven beyond doubt that drama-in-education is a viable tool to teach any subject irrespective of the subject-matter or the age of the learner; although most effective among children. According to Landy, drama elements are: "imitation, imagination, role-playing and interpretation account for much of a child's learning of language, movement and social behaviour" (5). By viewing the roles of the father/mother, the child learns what a parent is and what is expected of him/her in his relationship with the parent.

However, drama activities as used in this study implies the viewing of creative drama, children theatre children games and other related activities; - *Barney and Friends, Sesame Square* and *Super Kids* that are specifically aired / shown through Television, Video films and Projector in the classroom for the purpose of learning across the curriculum, as a means of enhancing youngsters classroom learning that could transform and empower the learner. The

learning activities could be dramatized, but the content may cut across the curriculum, i.e. Arithmetic, English Language etcetera.

Child: The 1992 United Nations Convention on the Rights of the Child (UNCRC) Article one defines the child as a person that is eighteen years of age and below. Thus the term child as used in this study, refers to anybody that is within three to eighteen years in Nigeria. Furthermore, a Nigerian child is anyone born of parents of Nigerian descent or anyone born of parents who subsequently, either by nationalization or naturalization becomes citizens of Nigeria, and that resides in Nigeria. Biologically, a child is generally anyone between birth and puberty and Children generally have fewer rights than adults and are classed as unable to make serious decisions, and legally must always be under the care of a responsible adult.

Definition of Terms which Comprise the Context of Multimedia

Multimedia is an extremely popular word and has multiples meaning which may lead to confusion in its interpretation. The word is often used in different human activities. Mayer lists several different interpretations of the word multimedia within different contexts:

> For some people, multimedia is a presentation of information by the computer of: text, graphics, animation and sound. For others, multimedia means a "live" presentation in which a group of people sit in a room watching images on one or more screens and listening to music or an orator (2)

Watching television, VCR or DVD can also be called a multimedia experience. Another instance of multimedia experience is PowerPoint in which a person presents slides off the computer onto a wider screen and talks about each slide. Even a technically simpler environment facilitates multimedia such as "chalk and speech" where somebody writes or draws on a blackboard, verbally explaining the lesson. Finally, the most common basic type of multimedia is a textbook since it consists of printed text and illustrations."

Communication "in one or more ways" refers to audio and visual sense by which the information is acquired. Multimedia has its applicability and impact in business, education,

entertainment and personal creativity (Jerram and Gosney 5). Multimedia in Librarianship is a term for a "construction unit which contains two or more different media or different forms of the same media, where neither one can be credited with primary significance. It is usually used as an entity and is called a multi-purpose and multimedia construction" (Stipek 10). This type of definition is based in the prefix multi i.e. several, which means multimedia as a component of two or more mediums, where it is not important whether the components are of the same or different sensory compartment.

Interpretation of multimedia in art is defined as "an artistic form in which several different artistic expressions are fused and connected: visual, musical, theatrical and dance, where modern technical media are used: photograph, film, VCR, sound recording etc." (Simons 5) Multimedia in art represents a synthesis of expressions of various artistic fields; it also "represents information to more than one medium" (William, Sawyer and Hutchinson 370). Similarly, Lockard and Abrams describe multimedia as "each system that unites two or more media into one product or presentation" (230). The last two definitions open the possibility for a multi-meaning understanding of multimedia.

Apart from the stated definitions of the wide field of human activities in which multimedia is used, other definitions of multimedia are based on computerized, synthetic displays of audio and visual media: images, text, sound, video and animation. Multimedia has its roots in Latin and is composed of two words: multi and media. *Multi* is a prefix in a compound word multimedia and comes from the Latin word *multus*, which means many (Palmer and Young 13). Multi is a "suffix in the compound word, and means many, more", meaning "that which is composed of more or many things" (Palmer and Young 13).

2.2 Theoretical Framework

The major theory guiding this works is the Cognitive Theory of Multimedia Learning (CTML). Its supporting theory is the Socio-cultural theory.

2.2.1 Cognitive Theory of Multimedia Learning (Mayer)

The Cognitive Theory of Multimedia Learning (CTML) Theory hinges on a principle known as the "multimedia principle" which states that "people learn more deeply from words and pictures than from words alone" (Mayer 47). However, simply adding words to pictures is not an effective way to achieve multimedia learning. This is the basis for Mayer's cognitive theory of multimedia learning. This theory proposes three main assumptions when it comes to learning with multimedia:

1. There are two separate channels (auditory and visual) for processing information (sometimes referred to as Dual-Coding theory);
2. Each channel has a limited (finite) capacity;
3. Learning is an active process of filtering, selecting, organizing, and integrating information based upon prior knowledge.

Humans can only process a finite amount of information in a channel at a time, and they make sense of incoming information by actively creating mental representations. Mayer also discusses the role of three memory stores: sensory (which receives stimuli and stores it for a very short time), working (where we actively process information to create mental constructs (or 'schema'), and long-term (the repository of all things learned). Mayer's cognitive theory of multimedia learning presents the idea that the brain does not interpret a multimedia presentation of words, pictures, and auditory information in a mutually exclusive fashion; rather, these elements are selected and organized dynamically to produce logical mental constructs. Furthermore, Mayer underscores the importance of learning (based upon the testing of content and demonstrating the successful transfer of knowledge) when new information is integrated with prior knowledge.

Design principles including providing coherent verbal, pictorial information, guiding the learners to select relevant words and images, and reducing the load for a single processing channel etc. can be entailed from this theory.

To the neuroscientist, learning and memory are so intricately entwined that one cannot discuss one without the other. Forming lasting memories has long been accepted as an essential part of the learning process. The process starts with some kind of stimulus to the brain cells; it could be an internal thought, such as a brainstorm, or an external event, such as television viewing. In his book, *Teaching with the Brain in Mind*, Eric Jensen describes how this process occurs in the brain: "a cell is electrically stimulated repeatedly so that it excites a nearby cell. If a weaker stimulus is then applied to the neighboring cell a short time later, the cell's ability to get excited is enhanced" (14). As we learn something new, some brain cells (specifically, neurons) grow by way of dendritic branching. This results in brain cells making more and more connections. Jensen further explains this process, known as brain plasticity:

> When we say cells connect with other cells, we really mean that they are in such close proximity that the synapse (spaces between the cells) is easily and almost effortlessly "used" over and over again. New synapses usually appear after learning (14).

These connections, or neural networks, become stronger the more often they are used. Perhaps, the first time you create a path, it is rough and overgrown. The next time you use it, it is easier to travel because you have previously walked over the weeds and moved the obstacles. In a similar fashion, the neural networks get more efficient, and messages travel more quickly. Thus, learning changes the brain anatomically; with each new stimulation, experience, and behaviour, it can rewire itself.

Media Technology and Educational Videos create learning environments that support the making of associations by providing access to new challenges, contexts, and information. Technology, through sound, text, and pictures, allows the user to experience people, places, and things that might otherwise be impossible in its absence. These multiple media, sometimes working alone and other times together, can create rich environments conducive to the acquisition of knowledge.

2.2.2 Socio-Cultural Theory and Drama Activities Educational Videos

The use of drama/theatre as an effective means of educating young people has its basis in key psychological theories. One of such is the Socio-cultural theory. The Socio-cultural theory stems from the work of Vygotsky, Bandura and many other theorists. Vygotsky proposed that learning is embedded within social events and occurred as individuals interact with other human beings, objects and events in the environment and this interaction helps the child learn what is important in their culture (18). Similarly, Bandura emphasized the importance of observational learning whereby children model behaviours, attitudes and emotional responses of others according to the observed benefits and adverse effects of those behaviours (191). Hence, the socio-cultural theory suggests that individuals' cognitive developmental processes and learning processes are simply products of their society and culture.

Educational Video could provide experiential learning opportunities for children that are particularly powerful because of the influence theatre have on the audience member's emotional and cognitive state. Thus, the use of Media- Educational Video/Educational Television (ETV) in education is supported by the idea that individuals learn from observing others, and receiving feedback from others, as well as through self-reflection and interaction between person and environment. Educational Video / Educational Television (ETV) allows children to look at life as an observer, making conscious moral decisions in relation to those situations that are played out for them. As such, it enables a 'cognitive playground' whereby children can experiment with different choices and experience vicariously the emotional consequences of their own and others' behaviours.

Gardner's *Theory of Multiple Intelligences* introduces the theory that all students have different ways of learning. There is the spatial intelligence (visual) learner, who learns best using his or her sight; the linguistic intelligence (auditory) learner, who learns best while listening; and the kinesthetic intelligence (movement) learner, who learns best when moving.

There are eight different learning styles, according to Gardner (24). Television/Video applies to two of the multiple intelligences. It involves listening and watching. A teacher could add movements and make it kinesthetic by having students dance while listening to songs. Gardner's *Theory of Multiple Intelligence* was established by the scientist, Howard Gardner, a professor at Harvard University and professor of cognition and education at Harvard Graduate School of Education. Gardner defines intelligence as "the ability to solve problems or create products which are important in certain cultural environments or communities" (Gardner, Cummings, Dunham and Pierce 220).

The theory of Multiple Intelligence is based on different types of intelligence: linguistic, logical-mathematical, inner, outer, musical, visual-spatial, physiological-kinaesthetic, natural and existential, noting that the last two were added in 1999 (Gardner, Cummings, Dunham and Pierce).

Verbal-linguistic intelligence – the ability to think with the help of spoken and written words, the ability to read, interest for written content: books, letters, Internet..., oral communication enhances memory and description.

Visual-spatial intelligence – spatial intelligence differs from visual intelligence. While visual intelligence is based on viewing and visualizing, spatial intelligence encompasses three dimensionality and relations in space. Visual-spatial intelligence most often is found in: spatial orientation, figurative and abstract visualization abilities, thinking by using image impressions, the possibilities of thinking in three dimension, redefining and reconstructing existing artistic compositions into new ones. Artistic creativity has an impact on the imagination, the ability of forming in two-dimensional and three dimensional materials, creating diverse practical works (drawings, paintings, prints, sculptures, relief, installations etcetera). The most frequent combination in class which supports great efficacy of learning is represented by stimulating verbal-linguistic and visual-spatial intelligence. These kinds of stimulation are supported by

multimedia. Multimedia fosters the development of the given two types of intelligence since by their structure they encompass the channels of the audio and visual senses. It is essential to train the pupils to listen and watch, observe, and even more important to hear and see, by using multimedia. It is also important through multimedia usage to monitor the achievements of pupils individually during class work, which directly affects the maximal increase of personal intellectual potential.

Logical-mathematical intelligence – provides for abstract thinking, creating meaningful connections and relations among subjects, elements or ideas, the ability to think numerically, counting, measuring, and understanding logical mathematical operations, critical thinking and creative solving of mathematical problems, organizational and research skills.

Musical intelligence – the ability to (re)produce rhythm, height and colour of tone, the ability to recognize, produce and reproduce music by using musical instruments or vocal interpretations. When playing a musical instrument, the skill of mastering the technique of playing is acquired, and in singing, the skills of mastering vocal techniques. Through active listening, a strong connection between emotions and musical expression is created along with the habit of enjoying listening to music.

Physiological-kinaesthetic intelligence – the ability to control movements of the body and handling of objects, thinking through movement, development of motoric activities, balance, coordination of movement of the entire body and dexterity, dancing, sports, acting etcetera.

Intrapersonal intelligence – the ability to understand oneself, self-awareness of personal feelings, values, thoughts and self-esteem, the ability to regulate personal feelings, moods i.e. emotional states, mental abilities and behaviour.

Interpersonal intelligence - the ability to understand and react to other people's moods, feelings, views, wishes, motives, behaviour, development of empathy, the ability of good

relationships i.e. interaction with people: family, neighbours, friends from the neighbourhood, pupils in school....., a leader in teamwork.

Natural intelligence – the ability to recognize and classify plants, animals and everything else in nature, the ability to understand the natural world and natural laws, understanding of animal behaviour, their needs and characteristics, growing and caring for plants.

Existential intelligence – the ability to think about the complexity of human existence (what does life mean to us, why do we die...), how to cope with life's problems.

Attention is focused on Gardner's work because the different types of intelligence are connected with inborn styles of learning and dominant profile styles of pupil-learning. These profiles are determined based on the dominance of the eye, ear and hand in relation to the dominant hemisphere of the brain. This type of definition informs on how to understand and acquire new information in the easiest possible way.

Piaget's *Theory of Cognitive Stages* is also relevant (Piaget 13). Piaget's theory explains the means by which the mind processes new information. The stage most third grade equivalent of Nigeria Primary two and three students fall under is the concrete operations stage, in which a child no longer needs to have objects to manipulate in order to understand a concept. By applying Piaget's theory, a teacher can create lessons incorporating TV and Videos that will take advantage of a student's stage of cognitive development: when students no longer need to physically manipulate material, they can begin to understand by watching someone else manipulate the material, e.g. on a video. According to Piaget, a child is at the Concrete Operations stage from ages 7 to 11 (Piaget 15). These are the ages of third through fifth grade students, equivalents of primary two to six in Nigeria. This is the stage at which teachers should look towards educational television in order to have more effective lessons using a variety of learning materials.

The contentions here are that television is a big part of students' everyday life and thus familiar and enjoyable to them. Therefore, bringing television into the classroom may enhance students' excitement about the general curriculum in third grade. For students who become bored listening to the same person every day, watching an educational video may sustain their interest and excitement about a subject. Once students become excited about a subject and want to learn more, the teacher's job becomes easier. By finding out which aspects of a certain subject interest the students, the teacher can create lessons that will continue to keep the students engaged. Once the excitement about a subject is generated for a student, a teacher can then assign textbook and other readings. Thus, educational television and Video help primary school pupils to learn by stimulating their interest in a certain subject; Arithmetic, English language, Social Studies etcetera. It can serve the same purpose for students in the Primary Three classroom.

Cohen posits that "when information is presented in a way that children can relate to, they enjoy learning what is being taught" (47). Although TV is an older technology and Educational media, teachers can (and should) still use it as a great resource for their classes. For example, reading textbooks or doing worksheets become more fun and interesting when children also watch a show or movie on the subject. Thus, using educational videos may help in optimizing teachers' use of class time. Teachers are busy trying to meet educational standards within limited timeframe. Finally, each student is an individual, and using educational television may help teachers address different learning styles, stimulate learners' empowerment and foster transformative learning.

2.3 Existing Interpretative Framework on Learning through Multimedia

How do we learn from Educational Videos and television? Many theories have provided understanding on how learning occurs with entertainment. Seels et al. name several theories such as Arousal Theory, Short-Term Gratification Theory, Interest Stimulation Theory – all of

which are based on the ability of the entertaining media to engage the learner, activate emotional states, initiate interest in a topic, and allow for absorption and processing of information (317). Below are few Educational Theories explaining how learning may occur via entertainment as captured by Seels et al:

1. **Arousal Theory:** Communication messages that can evoke varying degrees of generalized emotional arousal and that can influence any behavior in which an individual engages while in the state of arousal.
2. **Short-Term Gratification Theory:** Deals with affective and motivational components including enthusiasm, perseverance, and concentration.
3. **Interest Simulation Theory:** Suggests that entertainment can spark a student's interest in, and imagination about, a topic and thus promote learning and creativity. (318)

These theories suggest that we can indeed learn from Educational Videos and television. Stories can support the learning process by providing ideological scaffolding upon which new knowledge is organized. One reasons these technologies prompt learning is the use of multiple media to present information. In the case of television and film, visual and auditory media combine to present a rich experience for the viewer.

For many, the typical classroom experience involves a teacher imparting his or her wisdom through lecture and presentation. This one-way communication tradition has resulted in transmission of knowledge since the dawn of time. Yet, increasingly, it is being challenged. Educational technologies have the ability to go beyond audio. Not only can they present multiple media, but they can also prompt the learner to contemplate information, perform tasks, refine thinking, and demonstrate understanding. Multiple modalities (audio, visual) and active learning make this possible.

Researchers posit that explanations presented in words and pictures, as opposed to words or pictures, make for increased comprehension for the learner (Mayer 56). Dale's "Cone of Experience" provides evidence of these phenomena. Dale's research suggests that increasing the modalities by which content was presented could increase retention rates. Paivio provides an explanation of this need to address multiple modalities:

> Human cognition is unique in that it has become specialized for dealing simultaneously with language and with non-verbal objects and events. Moreover, the language system is peculiar in that it deals directly with linguistic input and output (in the form of speech or writing) while at the same time serving a symbolic function with respect to nonverbal objects, events, and behaviors. Any representational theory must accommodate this dual functionality (cited in James 8).

Engaging the learner through text and visuals has proved an effective means to enhance retention. But placing the learner in the middle of the content and responsible for making decisions and acquiring knowledge takes learning one step further. Confucius' quotation, "I hear and I forget. I see and I remember. I do and I understand," (cited in Wessel 23) makes the point plainly: learning by doing results in new knowledge and retained knowledge. Active learning involves putting students in situations where they must read, speak, listen, contemplate, think deeply, write, and respond (James 7). Bonwell and Eison have defined the following attributes of active learning which are also explored in Classroom Drama:

I. Students are involved in more than listening;
II. Less emphasis is placed on transmitting information, and more emphasis is placed on developing students' skills;
III. Students are involved in higher-order thinking (e.g., analysis, synthesis, evaluation);
IV. Students are engaged in activities (e.g., discussion, writing, kinesthetic activities); and
V. Greater emphasis is placed on students' explorations of their own attitudes. (17)

By putting the learner in control of the learning environment, educational software can support each of these active learning attributes. Simulation programmes such as modern computer games put the user in the middle of the action, planning and managing a burgeoning city. Authentic results, the success or downfall of the city, promote powerful lessons and understanding. Searching, reviewing, synthesizing, and reporting information accessed from the Internet is another example of active learning via technology.

2.3.1 Principles of Thinking, Teaching and Learning

Theories of learning are important in this study because they are central to Drama/Theatre-in-Education, ETV. The use of Educational Video is to stimulate learning. Thus our understanding of these theories will enhance our appreciation of multimedia/drama as a tool

for transmitting knowledge. Theories of learning developed by a number of notable scholars Gesell, (1880-1961) Erikson, (1902-1994), (Bruner, 1966 & Piaget, 1969) have located the importance of movement centrally in the construction of knowledge and since these publications drama educators theorists around the world have relied on these works in support of the valuing of drama in education.

Gardner's identification of bodily kinesthetic intelligence as one of the multiple intelligences drew attention to the existence of bodily thinking and to the inherent wisdom of the body; and as Wright points out "learning through drama can also be attributed to each of Gardner's intelligences" (34). Bloom's Taxonomy of Thinking (1956) with its 6 levels of complexity namely, knowledge, comprehension, application, analysis, synthesis and evaluation has also been cited by Pugh-McCutchen as another valuable teaching framework that supports learning from basic to higher order thought; an approach that teaches children how to "think, problem solve and make well informed decisions - all of which are useful in life as well as in drama" (82). A number of contemporary theorists (Perkins and Richhart) have also analyzed thinking in light of knowledge acquisition and have developed a range of meta-cognitive thinking strategies such as 'look, look, look again' and 'I see', 'I think', 'I wonder'. Strategies of this kind provide support for this research specifically in relation to helping children to describe what they are seeing and thinking and in doing so enable the recording of first hand, rich narrative descriptions.

Vygotsky's theory of socio-cultural mediation, Dewey's emphasis on situated learning and Bruner's theory of discovery learning highlight the significance of drama as a cultural tool for supporting learning. Vygotsky said that, "art, (drama) is the social technique of emotion, a tool of society which brings the most intimate and personal aspects of our being into the circle of social life (Vygotsky 249). In his idea of the 'zone of proximal development' he highlights the importance of inter-subjective understanding and social interaction. Vygotsky maintains

that problem solving in a social context compels children to formulate their ideas verbally and this process enables them to begin the act of self-directed monitoring. He highlights the important role that adults or more capable peers play in the learning process and this study will regard the zone of proximal development as an inter- subjective zone where in the context of a supportive, experiential, empathetic educational relationship the children will feel safe to discover create and explore meaning making through drama. Vygotsky, indicates that "learning is a social process where young children are actively engaged in learning about their worlds with adults and friends: through ongoing dynamic interchanges children and adults are involved in a process of co-construction of knowledge with learning shaped by the context within which the child operates" (546). It is clear that children are strong and capable participants in their own learning and within the context of interdependent and reciprocal relationships they develop a number of important skills in life.

Theories of Learning

In psychology and education, "learning is commonly defined as a process that brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing, or making changes in one's knowledge, skills, values, and world views" (Illeris 34). Learning as a process focuses on what happens when the learning takes place. While the explanations of what happens constitute learning theories: a learning theory therefore is an attempt to describe how people and animals learn, thereby helping us understands the inherently complex process of learning.

"Learning theories have two chief values: one is in providing us with vocabulary and a conceptual framework for interpreting the examples of learning that we observe. The other is in suggesting where to look for solutions to practical problems" (Leonard 17). The theories do not give us solutions, but they do direct our attention to those variables that are crucial in finding solutions. Vygotsky sees learning "as a process of acquiring new or modifying existing

knowledge, behaviours, skills, values or preferences and may involve synthesizing different type of information" (38).

Plato, a rationalist, believed that human knowledge was apprehended, not through the senses, but by the intellect. It is thought, not sense experience, which tells us the true nature of the world. Aristotle, by contrast, was an empiricist, believing that all knowledge comes from experience through sense perception, though we use our intellect in order to process it. The debate has been repeatedly restated by philosophers through the years. When we enter the 20th century, in which certain areas of philosophical enquiry became 'experimental' and developed into modern psychology, we find that the rationalist versus empiricist debate continues to rage as strongly as ever.

Thus, the philosophical argument about how we acquire knowledge is relevant to this study because different theories of learning have evolved over the years to explain how human being learns. For instance, Gestalt psychology arose as a reaction to behaviourist/empiricist epistemologies in the field of perception. An empiricist view of perception holds that 'nothing is in the mind that is not in the senses'. Traditional approaches to learning and teaching are largely derived from empiricist views of human nature. Learners are regarded as tabula rasa, empty vessels, into which the teacher pours pre-existing knowledge. This is clearly a view of the learning process where the learner is passive.

Thus there are three main categories or philosophical frameworks under which learning theories fall: *Behaviorism*, *Cognitivism*, and *Constructivism*. Behaviorism focuses only on the objectively observable aspects of learning. Cognitive theories look beyond behavior to explain brain-based learning. Constructivism views learning as a process in which the learner actively constructs or builds new ideas or concepts.

Gestalt Theory

Along with Kohler and Koffka, Max Wertheimer was one of the principal proponents of Gestalt theory which emphasized higher-order cognitive processes in the midst of behaviorism. "The focus of Gestalt theory was the idea of "grouping", i.e. characteristics of stimuli causes us to structure or interpret a visual field or problem in a certain way (Wertheimer 53, quoted in Leonard 15). The primary factors that determine grouping were:

> (1) **Proximity** - elements tend to be grouped together according to their nearness,
>
> (2) **Similarity** - items similar in some respect tend to be grouped together,
>
> (3) **Closure** - items are grouped together if they tend to complete some entity, and
>
> (4) **Simplicity** - items will be organized into simple figures according to symmetry, regularity, and smoothness. (Leonard David 18)

These factors were called the laws of organization and were explained in the context of perception and problem-solving. Wertheimer was especially concerned with problem-solving. Werthiemer provides a Gestalt interpretation of problem-solving episodes of famous scientists (e.g., Galileo, Einstein) as well as children presented with mathematical problems. The essence of successful problem-solving behavior according to Wertheimer is being able to see the overall structure of the problem:

> A certain region in the field becomes crucial, is focused; but it does not become isolated. A new, deeper structural view of the situation develops, involving changes in functional meaning, the grouping, etc. of the items. Directed by what is required by the structure of a situation for a crucial region, one is led to a reasonable prediction, which like the other parts of the structure, calls for verification, direct or indirect. Two directions are involved: getting a whole consistent picture and seeing what the structure of the whole requires for the parts. (Cited in Leonard 25)

Thus, the original Gestalt theory, pioneered by the early Gestalt psychologists, advocated a completely different approach. Their emphasis was on perceptual experience being organized into meaningful wholes. This alternative theory of perception recognized that human beings are active co-creators of their own experiences through a vast range of learning processes which take place within a wider field.

Application: Gestalt theory applies to all aspects of human learning, although it applies most directly to perception and problem-solving. "The classic example of Gestalt principles provided by Wertheimer is children finding the area of parallelograms" (quoted in Leonard 25). As long as the parallelograms are regular figures, a standard procedure can be applied (making lines perpendicular from the corners of the base). However, "if a parallelogram with a novel shape or orientation is provided, the standard procedure will not work and children are forced to solve the problem by understanding the true structure of a parallelogram (i.e., the figure can be bisected anywhere if the ends are joined)" (quoted in Leonard 13).

Principles of Gestalt Learning Theory

1. The learner should be encouraged to discover the underlying nature of a topic or problem (i.e., the relationship among the elements).
2. Gaps, incongruities, or disturbances are an important stimulus for learning
3. Instruction should be based upon the laws of organization: proximity, closure, similarity and simplicity. (Leonard 32)

Constructivism Theory of Learning is a theory that explains how knowledge is constructed in the human being when information comes into contact with existing knowledge that had been developed by experiences. It has its roots in cognitive psychology and biology and an approach to education that lays emphasis on the ways knowledge is created in order to adapt to the world: "constructs are the different types of filters we choose to place over our realities to change our realities from chaos to order" (Victor and Brittain 83). Glasersfeld describes constructivism as "a theory of knowledge with roots in philosophy, psychology, and education. Constructivism has implications for the theory of instruction, discovery, hands-on, experiential, collaborative, project-based, and task-based learning are a number of applications that base teaching and learning on constructivism" (29).

"Constructivists do not look for copies or mirroring of an outer reality in the human mind, but instead they rather see humans as observers, participants, and agents who actively generate and transform the patterns through which they construct the realities that fit them" (Leonard 65). The Constructivist includes Lev Vygotski, Jean Piaget and Jerome Bruner.

Application

The nature of the learner: The type of learner is self-directed, creative, and innovative. The purpose in education is to become creative and innovative through analysis, conceptualizations, and synthesis of prior experience to create new knowledge. The educator's role is to mentor the learner during heuristic problem solving of ill-defined problems by enabling quested learning that may modify existing knowledge and allow for creation of new knowledge. "The learning goal is the highest order of learning: heuristic problem solving, meta-cognitive knowledge, creativity, and originality. Furthermore, it is argued that the responsibility of learning under constructivism reside increasingly with the learner" (Glasersfeld 57).

Social constructivism emphasizes the importance of the learner being actively involved in the learning process, unlike previous educational viewpoints where the responsibility rested with the instructor to teach and where the learner played a passive receptive role: perhaps this exactly the purposes of drama-in-education.

Teaching and learning under constructivism centred on "discussion method" where teacher serves as an umpire, who involves students seated in a circle, motivating and controlling their own discussion. The teacher acts as little as possible. Perhaps the teacher's only function is to observe, although he/she might begin or shift or even direct a discussion. The students get it rolling, direct it, and focus it. They act as a team, cooperatively, to make it work. They all participate, but not in a competitive way. Rather, they all share in the responsibility and the goals, much as any members share in any team sport. Although the goals

of any discussion will *change* depending upon what's under discussion, some goals will always be the same: to illuminate the subject, to unravel its mysteries, to interpret and share and learn from other points of view, to piece together the puzzle using everyone's contribution. Discussion skills are important. Every member of the group gets this discussion rolling and keep it rolling and interesting. Just as in any sport, a number of skills are necessary to work on and use at appropriate times. Everyone in the group contribute by using these skills.

The role of the instructor as facilitator: According to the social constructivism approach, instructors have to adapt to the role of facilitators and not teachers. A teacher gives a didactic lecture that covers the subject matter; a facilitator helps the learner to get to his or her own understanding of the content. In the former scenario the learner plays a passive role and in the latter scenario the learner plays an active role in the learning process. The emphasis thus turns away from the instructor and the content, and towards the learner. This dramatic change of role implies that a facilitator needs to display a totally different set of skills than a teacher. A teacher tells, a facilitator asks; a teacher lectures from the front, a facilitator supports from the back; a teacher gives answers according to a set curriculum, a facilitator provides guidelines and creates the environment for the learner to arrive at his or her own conclusions; a teacher mostly gives a monologue, a facilitator is in continuous dialogue with the learners. A facilitator should also be able to adapt the learning experience ‘in mid-air’ by taking the initiative to steer the learning experience to where the learners want to create value.

The constructivist learning environment is also designed to support and challenge the learner's thinking. While it is advocated to give the learner ownership of the problem and solution process, it is not the case that any activity or any solution is adequate. The critical goal is to support the learner in becoming an effective thinker. This can be achieved by assuming multiple roles, such as consultant and coach.

Behaviorism or Social Learning Theory

Behaviorism or Social Learning Theory: This first coherent theory of learning is based mainly on the work of Pavlov in the Soviet Union and of B.F. Skinner in the United States. This simple but powerful theory surmises that learning is a mechanical process of habit formation and proceeds by means of the frequent reinforcement of a stimulus-response sequence.

According to this school of thought, every utterance *speech* is produced as a result of the presence of some kind of stimulus. Such stimulus could be internal or external, physical or verbal. For instance, language response to hunger, which is an internal state, could be the utterance "I am hungry." For a child to learn to make such a response, his attempt at producing the piece of language will have to be reinforced, and if reinforced, would likely lead to further utterances or at least the mastery of the initial utterances through repeated use.

Application:

I. Behaviorists believe that "Teachers must learn how to teach ... they need only to be taught more effective ways of teaching."
II. Behaviorism assumes that a learner is essentially passive, responding to environmental stimuli.
III. Believes that a learner starts out with a clean slate, and behavior is shaped by positive and negative reinforcement.
IV. Reinforcement, positive or negative, increases the possibility of an event happening again.
V. Punishment, both positive and negative, decreases the possibility of an event happening again.
VI. Positive reinforcement is the application of a stimulus.
VII. Negative reinforcement is the withdrawal of a stimulus.
VIII. Behaviorism is a precursor to cognitive learning (Illeris 86).

The Role of the Teacher under Behaviorism

I. Give the learner immediate feedback.

II. Break down the task into small steps

III. Repeat the directions as many times as possible

IV. Work from the most simple to the most complex tasks

V. Give positive reinforcement

VI. Skinner believed that positive reinforcement is more effective in changing behavior then punishment.

VII. All of these are to be adjusted to be age appropriate

The Role of the Students under Behaviorism

I. Respond to reinforcement

II. Pace themselves in an assignment to work from the most basic to the more complicated concepts

III. Ask questions for more clarity in directions

IV. Ask for feedback (Viktor and Brittain 98).

Reflexive Summary of Theories of Teaching and Learning on Media in Education

Perhaps the most critical shift in education in this 21st Century has been a move away from a conception of "learner as sponge" toward an image of "learner as active constructor of meaning". Although Plato and Socrates (not to mention Dewey) reminded us long ago that learners were not empty vessels, blank slates, or passive observers, thus, "much of U.S. schooling has been based on this premise" (Cuban 13). However, the Nigeria education premise is based on teachers has talked; students have been directed to listen. The assumption has been that if teachers speak clearly and students are motivated, learning will occur. If students do not learn, the logic goes, it is because they are not paying attention or they do not care.

These ideas were grounded in a theory of learning that focused on behavior. One behavior leads to another, behavioral-learning theorists argued, and so if teachers act in a certain way, students will likewise act in a certain way. Central to behaviorism was the idea of conditioning – that is, training the individual to respond to stimuli. The mind was a "black

box" of little concern. But behavioral theorists had to make way for the "cognitive revolution" in psychology, which involved putting the mind back into the learning equation. As Lesh and Lamon put it; "Behavioral psychology (based on factual and procedural rules), has given way to cognitive psychology (based on models for making sense of real life experiences" (18). In this shift, several fields of learning theory emerged.

According to Bransford, Brown, and Cocking: "Neuroscientists, for example, learned that the brain actively seeks new stimuli in the environment from which to learn and that the mind changes through use" (82); that is learning changes the structure of the brain. However, it is still too early to claim that neuroscience can definitely explain how people learn.

The work of other cognitive theorists helps here. For example, research suggests that learners from a very young age; make sense of the world, actively creating meaning while reading texts, interacting with the environment, or talking with others. Even if students are quietly watching a teacher speak, they can be actively engaged in a process of comprehension, or "minds on" work, as many teachers describe it. As Bransford, Brown, and Cocking wrote, "It is now known that very young children are competent, active agents of their own conceptual development: in short, the mind of the young child has come to life" (79–80). This cognitive turn in psychology is often referred to as a *constructivist* approach to learning.

Understanding that students construct meaning has led to increased attention to students' interpretations of what they witness in class. Recall the game of "telephone": A phrase, whispered from person to person, is followed by hilarity when the last person announces something quite different from what the first said. This game exemplifies the role of interpretation in any human endeavor. At the basest level, what we "hear" is filtered through our assumptions and values, attention, and knowledge. Some students interpret a given phenomenon differently from the way others do. Some students interpret the film *Living in Boundage* differently from the way their friends do. All of us, in school and out, shape and sculpt the information we encounter, "constructing" our understanding. Although two students

might encounter exactly the same information, as active participants in their own knowledge building, students develop understandings that can be qualitatively different.

Especially important has been "the growing revelation of the powerful role of prior knowledge and experience in learning new information" (Cobb 15). Students enter school with ideas, and those ideas are a significant force to be reckoned with. Researchers have shown that students' beliefs that the earth is flat last well after teachers and others have told them otherwise. "Elementary- age children have been found to hold naive theories of prejudice and discrimination that resonate with the theories of social scientists that have grappled with similar questions about why people dislike or discriminate against those who are different" (Rose 20). Similarly, Byrnes and Torney-Purta found that "adolescents use naive social, economic, and political theories in identifying causes of social issues" (265). Many young children cannot understand why 1/4 is larger than 1/8 because 8 is bigger than 4. Researchers are continuing to uncover how students' preconceptions, nonscientific beliefs, conceptual misunderstandings, vernacular misunderstandings, and factual misconceptions act as powerful filters in what and how they learn.

Thus, when we acknowledge that students interpret—and do not automatically absorb—the information and ideas they encounter in the world through the experiences and theories they bring to school, the links between learning and teaching become more complicated; and at such deserve our attention as stakeholders in the education sector. Rather than appearing as a natural result of teaching, learning is seen as inherently "problematic." Teachers might create opportunities for students to learn, but teachers cannot control students' interpretations. Teachers become responsible for diagnosing students' interpretations and helping them alter, edit, and enrich them. But we get ahead of ourselves. Each of the shifts in learning theories that we discuss here has notable implications for teachers' roles and responsibilities.

One unfortunate consequence of the increased interest in constructivist learning theories has been the wholesale rejection of behaviorist theories of learning by some enthusiasts. This "throwing the baby out with the bathwater" phenomenon is neither new nor productive. Students can learn while they absorb new information (indeed, just because children are sitting still and quiet does not mean that their minds are not racing), just as they can learn through being more active. Similarly, activity does not mean that learning is taking place. Any and all theories are based on limited information; they are conjectures and assertions based on empirical research, and all scientists, including learning scientists are constantly interrogating their theories.

Moreover, there are times when one needs multiple theories. Just as physicist think of light as both wave and particle, "teachers can theorize about learning in both cognitive and behavioral terms" (Bransford, Brown, and Cocking 38). Donovan and Bransford argued, in fact, that "we need multiple metaphors for learning and that to throw one out in favor of another is dangerous" (18). Because theories vary in their quality and rigor; "it seems imperative that teachers be well-informed, skeptical consumers of "new" educational ideas or reigning theories" (Donovan and Bransford 20). They interpret, adapt, and combine those theories as they use them in practice. Indeed, current thought suggests that "a "balanced" view of learning and teaching is crucial" (Bransford, Brown, and Cocking 22). Students need opportunities to learn in multiple ways, and teachers need to have a pedagogical repertoire that draws from myriad learning theorists. Recent reviews of the state of the art in learning theory, especially *How People Learn* (Bransford, Brown, and Cocking 2000) and *How Students Learn* (Donovan and Bransford 2005), are particularly helpful resources in culling the major findings from learning research. It is against this backdrop of the above positions that this study concludes that creative drama as a classroom teaching method is a melting pot of all the learning theories that is needed to be understood by every teacher. Below are the comprehensive learning theories inherent in an excellent creative dramatic programme:

Table 1: Learning Theories, Theorists and Description

Theorist	Theory	Description
Ausubel	Subsumption Theory	Mechanism by which new material presented in academic settings (lectures) can be integrated into existing mental structures. For subsumption to occur, the presentation of new knowledge should be preceded by "advance organizers."
Bandura	Observational Learning Theory	Behavior can be learned through observation of others.
Bruner	Constructivist Theory	Individuals actively construct knowledge by comparing new ideas or concepts with their current knowledge (schema or mental models).
Comenius	Pansophism (universal knowledge)	The idea that learning, emotional, and spiritual growth are interwoven. Proposed teaching through stimulation of the senses, not merely through memorization. Considered the "Father of Modern Education."
Dewey	Learning by Doing	Learning occurs through experience.
Erikson	Socio-emotional Development	Erikson's "Eight Stages of Man" describes a series of crises individuals pass through at different ages. The stages begin with "trust versus mistrust" in infancy and continue through a series of paired outcomes for each age through older adulthood.
Festinger	Cognitive Dissonance	Inconsistencies between behaviors and beliefs motivate people to change. One basis for constructivism.
Freud	Levels of Consciousness	The mind operates at different levels: conscious versus unconscious. He further subdivided the mind into the id (primitive motivations), ego (logical portion of the mind which acts to satisfy the id - when possible), and the super-ego (the conscience).
Gagne	Conditions of Learning	For different kinds of learning (motor skills, verbal skills) different conditions are needed, so different strategies should be used.
Gardner	Multiple Intelligences	Each individual possesses seven distinct and measurable forms of intelligence: linguistic, logical-mathematical, spatial, body-kinesthetic, musical, intrapersonal, and interpersonal.
Kohlberg	Stages of Moral Development	Pre-Conventional - based on self-centered interests Conventional - based on conformity to local expectations Post-Conventional - based on higher principles
Locke	Tabula Rasa	The idea that individuals are "blank slates" on which teachers could "write" knowledge. A forerunner of behaviorism.
Maslow	Hierarchy of Needs	Humans naturally strive to satisfy needs. The five levels of needs, from lowest to highest, are: Physiological, safety, love, esteem, self-actualization. Lower level needs must be satisfied before the individual can move on to satisfy higher level needs.
Miller	Information Processing Theory	Short term memory can only hold 5-9 "chunks" of information at a time. A chunk can be any meaningful idea like a word, an identifiable image, or a digit.

Pavlov	Classical Conditioning (Behaviorism)	The association of new responses with existing stimulus-response pairs. Classic example is pairing the ringing of a bell with presentation of food to dogs. After repeated pairing, the dogs will salivate upon hearing the bell (even if food is not presented). Original stimulus (S) response (R) pair is food -- salivate. New S-R pair is bell -- salivate.
Piaget	Genetic Epistemology	Developmental stages of child development: 0-2 years: "sensorimotor" - motor development 3-7 years: "preoperation" - intuitive 8-11 years: "concrete operational" - logical, but non-abstract 12-15 years: "formal operations" - abstract thinking
Rogers	Experiential Learning	Two types of knowledge: academic and experiential. Unlike academic knowledge, experiential knowledge is acquired to meet the needs of the learner, usually to complete an important, real-life task. Example: Learning to drive a car.
Skinner	Operant Conditioning (Behaviorism)	Learning is the result of changes in behavior. As stimulus-response cycles are reinforced, individuals are "conditioned" to respond. Distinguished from Connectionism because individuals can initiate responses, not merely respond to stimuli.
Thorndike	Connectionism (Behaviorism)	Learners form associations or connections between a stimulus and a response. Through trial and error, rewarded responses would be strengthened.
Vygotsky	Social Development Theory and ZPD	Social interaction is critical for cognitive development. Related to this is the idea of a "Zone of Proximal Development (ZPD)." Some skills, an individual can perform independently. Other skills can be performed if the individual has assistance. Skills that can be performed with assistance are said to be within an individual's ZPD. The ZPD is the theoretical basis for scaffolding.
Watson	Behaviorism	Proposed that most human learning and behavior was controlled by experience (not genetically pre-determined). Believed the only behaviors that should be studied are the "observable" ones.
Wertheimer	Gestalt Theory	Some ideas can only be understood as part of a "bigger picture" Important in problem-solving.

(Svinicki 17-21)

Thus, theories of learning, whether explicit or tacit, informed by study or intuition, well-considered or not, play a role in the choices instructors make concerning their teaching. The major trend in understanding how students learn has been a movement away from the

behaviorist model to a cognitive view of learning (see Svinicki below) for an overview of learning theories and implications for teaching practice).

Implications for Teaching Practice of Key Ideas from Learning Theories

1. Learning is a process of active construction

Learning is the interaction between what students know, the new information they encounter and the activities they engage in as they learn. Students construct their own understanding through experience, interactions with content and others, and reflection.

Teaching Implication:

Provide opportunities for students to connect with your content in a variety of meaningful ways by using cooperative learning, interactive lectures, engaging assignments, hands-on lab/field experiences, and other active learning strategies.

2. Students' prior knowledge is an important determinant of what they will learn.

Students do not come to your class as a blank slate. They use what they already know about a topic to interpret new information. When students cannot relate new material to what they already know, they tend to memorize—learning for the test—rather than developing any real understanding of the content.

Teaching Implication

Learn about your students' experiences, preconceptions, or misconceptions by using pre-tests, background knowledge probes, and written or oral activities designed to reveal students' thinking about the topic.

3. Organizing information into a conceptual framework helps students remember and use knowledge.

Students must learn factual information, understand these facts and ideas in the context of a conceptual framework, and organize knowledge in ways that facilitate retrieval and application in order to develop competence in a new topic.

Teaching Implications

Support students by using concept maps, flowcharts, outlines, comparison tables, etc., to make the structure of the knowledge clear

4. Learning is a social phenomenon.

Students learn with greater understanding when they share ideas through conversation, debate, and negotiation. Explaining a concept to one's peers puts knowledge to a public test where it can be examined, reshaped, and clarified.

Teaching Implications

Use Cooperative learning strategies, long-term group projects, class discussions, and group activities to support the social side of learning

5. Learning is context-specific.

It is often difficult for students to use what they learn in class in new contexts (i.e., other classes, the workplace, or their personal lives).

Teaching Implication

Use problem-based learning, simulations or cases, and service learning to create learning environments similar to the real world

Students' metacognitive skills (thinking about thinking) are important to their learning.

Many students utilize few learning strategies and have a limited awareness of their thinking processes.

Teaching Implication

Help students become more meta-cognitively aware by modeling your thinking as you solve a problem, develop an argument, or analyze written work in front of the class. Teach metacognitive strategies, such as setting goals, making predictions, and checking for consistency. Focus attention on meta-cognition by having students write in a learning journal or develop explanations of their problem-solving processes. (Svinicki 23-25)

2.3 Empirical Review

This section appraises the extant literatures that espouse the use of multimedia and drama activities as a teaching tool and modes of teaching independently and as well as highlight the way in which people learn through multimedia and drama respectively.

2.3.1 Multimedia in Education: An Overview

Multimedia in teaching has an educative role in that they stimulate developmental changes in the pupil. Media in teaching are classified with regard to the senses they stimulate, thus broadening the existing classification of media. The most common classification of media: audio, visual and audio-visual, is extended to: audio, visual, kinaesthetic, olfactory and taste, thereby focusing more attention to sensory class work. The historical development of mass media is shown: film, television and computers.

A medium is "an intervening agency, means, or instrument by which something is conveyed or accomplished" (Mayer 4). The plural form of medium is *media* which, in the context of education, includes the means to create, store and present instructional content. These include tools, such as chalk and talk, books and computers, slide projectors, video

projection, overhead projectors, document cameras, audio systems (a CD player, radio), combined sound and video systems (television, digital video cameras, and DVD's), and the media objects themselves.

The term *multimedia* was introduced in the 1960s to describe the combined use of several media, such as text, film, video, still images, and audio. Today, multimedia has become closely associated with instruction that includes the Audio-Visual media in the teaching and learning process. The most common combinations of multimedia comprise audio-visual media, more precisely audio-visual multimedia, as multimedia are concurrent components of at least two or more media of the audio-visual sensory area.

Multimedia in teaching happens due to combining different media and multimedia with the aim of influencing developmental changes in pupils. “Multimedia in teaching signifies mutual supplementation and enrichment in the impact of two or more media e.g. textual and audiovisual, or the teacher’s lecture, supplemented with Instructional Television, Video and text” (Mayer 125).

You will notice that all of the media mentioned above target either the eye or the ear. Of the five human senses, vision is recognized as the most powerful data-acquisition device for the brain.

Edward Tufte, a professor of statistics and graphic design at Yale University, explains why the most effective presentation methodologies attempt to convey information visually, rather than verbally alone. “Visual displays of information”, he says, “encourage a diversity of individual viewer styles and rates of editing, personalizing, reasoning, and understanding. Unlike speech”, Tufte says, “visual displays are simultaneously a wideband and a perceiver-controllable channel” (19).

The terms *wideband* and *channel* come from the science of communications. The term *channel* in this context is the same as *medium*, pathway or route, along which data travel. A wideband channel carries more data at higher speeds. A visual display is an example of a

wideband channel, carrying more data at higher speeds than simple speech. A visual display is also "perceiver controllable" in that the person doing the viewing can absorb the data by scanning them at a speed and in a sequence that most naturally fits that person's intellectual strengths.

Howard Gardner, in keeping with his theory of *Multiple Intelligences*, would agree that each individual assimilates knowledge differently depending on the makeup of his or her mind. Speech, on the other hand, though it is a powerful medium for communication when used by skilled speakers, is not so easy to digest. It requires more mental effort to assimilate because less information is conveyed at a slower speed, thus requiring more concentration and extrapolation on the part of the listener. Using words to describe a house will take a lot longer and almost certainly will be less effective than showing a diagram or some photos. This is not to say that a verbal description may not be more beautiful. Paradoxically enough, when the writer or storyteller has great skill with words it often is.

Of course, the senses of touch, smell and taste are powerful learning media, too. This is why good teachers intersperse speech with illustrations and mix verbal presentations with active, hands-on learning. The younger the audience, of course, the more important these sensory vehicles for learning are. This is also one of the reasons for the development of websites and computer applications that simulate experiences—field trips, archaeological digs, scientific experiments, life in the past. These create virtual "hands-on" learning opportunities for many students as well as providing visual and audio instruction.

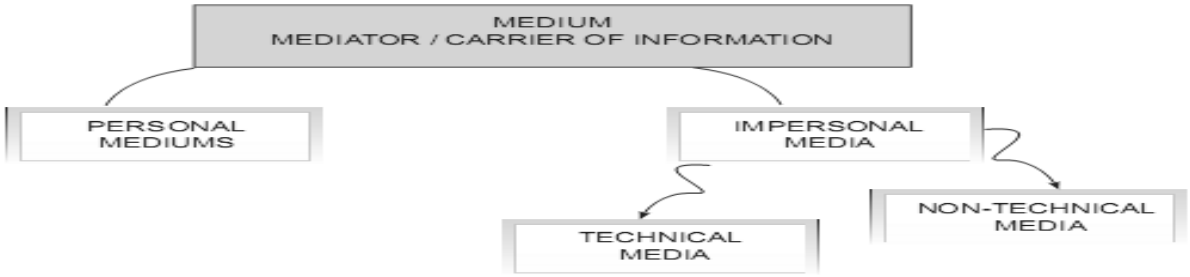
Multimedia in Teaching: Multimedia in teaching has an educative role in that they stimulate developmental changes in the pupil. In this section, attention is focused on determination of the term, structure and taxonomy of multimedia. The structure of multimedia is made up of two or more different media. Therefore, as a starting point, media are interpreted in the paper.

Media in teaching are classified with regard to the senses they stimulate, thus broadening the existing classification of media. The most common classification of media: audio, visual and audio-visual, is extended to: audio, visual, kinaesthetic, olfactory and taste, thereby focusing more attention to sensory class work. The historical development of mass media is shown: film, television and computers. With the arrival of the multimedia computer (twenty years ago), the term multimedia is more frequently referred to computer multimedia, since the research based on cognitive psychology is often focused on studying the phenomena of learning with the help of computerized verbal-image sources, because of the analogy of the learning process. Mayer, been more precisely calls this type of multimedia learning *dual-channel* or *dual code learning* (3). Therefore, the possibilities of multimedia usage of Videos and Television in class are interpreted in this study.

Classification of Media in Teaching: Media in teaching are an element of the methodical-didactical field, and represent carriers and transmitters of information. As carriers of information, they signify a teaching resource, while as transmitters have the role of a teaching aid. There are many classifications of media in teaching. A few basic ones that are of a high-quality structure for acquiring experiences of various sensory areas will be mentioned.

In the historical origins of teaching, it was considered that the teacher was the only source of information. Gagne mentions a directed communication in the model function of learning through various media (Tway 7) as one of the media. Edling, also in his own classification of media with regard to sensory modality and strength of stimuli (Tway 7) highlights the human factor through direct experiences with people. Therefore, in didactics, persons who are carriers of information and mediate them for the purpose of learning processes are called personal mediums. Gradually, the genre of sources was expanded to: "various teaching resources and aids (subjects, objects, phenomena and symbols from the real world, didactically formed media etc.) and pupils' experiences" (Tway 9).

Fig 1: Types of teaching media according (Tway)



In the given classification, apart from personal mediums, there are also impersonal media, which are further broken down into technical and non-technical media. From the given classification, in which the media are shown in a didactic function, it can be concluded that multimedia are components of impersonal, technical media.

With the development of technology and teaching technology, different media are introduced. Today there are endless ways of self-expression of pupils through media as well as many different ways in acquiring knowledge and understanding the world. Media contain and transmit information which is acquired. Although media are all around us, they take on a didactic role in the moment when information they contain and promote serves the purpose of teaching and learning of pupils. This is what we mean by media in teaching.

For easier reviewing, the table below shows classification of media in teaching with regard to acquiring of experiences i.e. understanding different sensory areas. Apart from this, this classification aims to underline the significance of media usage which is represented by all sensory areas in which pupils receive the necessary information, and not just individual, which is often the case in existing classifications listed in this chapter. A deeper meaning of this kind of classification and usage of teaching media is to stimulate a richer sensorial integration that enhances the process of learning. All media are not listed because it is impossible to list them all, and that is not the goal here. Media of each sensory area comprise various subjects, objects, materials, machines, devices, animals, plants and people. The basic role of media is creating

developmental changes in pupils. Through media, pupils gain new knowledge, working habits, develop abilities, skills and develop personal viewpoints.

Audio media produce and/or transmit hum, sounds, voices, animal sounds, and tones. They influence the development of hearing, development of rhythm, ability to remember music, mastering musical language, musical notes, musical pieces and forms, musical taste, national and international musical cultural heritage. They influence the mastering of content of other school subjects. Visual media demonstrate various visual displays of different artistic areas. They influence the development of artistic-visual communication, visual observation, application of artistic tools, materials and techniques, influence mastering the content of other school subjects, aesthetic evaluation as well as national and international artistic cultural heritage. "Pupils master the relations: big-small, empty-full, right-angled-curved, light-dark, hot-cold, tone-colouristic, fat-thin, short-long, contour-constructive, shiny-matt, and striking-dimmed etc." (Tway 19)

By observing objects, the pupils can notice the attributes of surfaces, which are also listed in kinaesthetic media: smooth-rough., soft-hard etc. Kinaesthetic media help in successful mastering of motoric knowledge (biotic and specific) and developing motoric and functional abilities i.e. raising the entire anthropological status of the pupil to a higher level. In doing so, kinaesthetic media also serve in the development of motoric skills such as: speed, coordination, flexibility, strength and precision. In media classification, the kinaesthetic and tactile fields are merged into the kinaesthetic field. The table below is media classification by Tway:

The Classification of Multimedia

Media in Teaching					
Auditory	**Visual**	**Kinaesthetics**		**Olfactory**	**Auditory**
Megaphone tape, magnetophone, Gramophone record, Gramophone, Radio, Audio cassette, Cassette player, CD with sound recording, CD player for sound recording, Dictaphone, Mini disc, Mini disc recorder, Musical Instruments (classic, electronic, improvised) Microphone, Mobile (cell) phone and a computer in the role of audio stimuli, musicians.	Art Techniques, Tools And Materials, Drawing, Sketch, Croquis, Caricature, Comic, Picture Poster, Billboard Imprint, Sculpture, Photograph, Artistic Reproduction, Applications For Flanelographs And Magnetographs (Micro, Macro) Model, Simulator, Scale Model, Relief, Stereograph, Signs (Letters – Books, Magazines, Newspapers, Commercial... Numbers, Musical Notes, Scouts, Military, Traffic, Map, Measurement, Seal, Crest, Flag, Rebus, Emblem, Logo) Scheme, Pictogram Collections And Samples Stick On Pictures Stamps, Globe, Toys (Dolls Constructive...) Maps (Historical, Geographical...) Tables, Charts Holograms, Books (Encyclopaedias, Textbooks, Picture-Books (Magazines, Well Known Newspapers Letter, Art Tools And Materials, Ruler, French Curve, Film (Silent, Element-Film, Microfilm) Apparatus For Element Film, Camera (Classic, Digital), Slides, Slide Projector, Slide Film, Epi-Projector, Overhead Projector, Transparency, School blackboard, Photocopying machine, TV, TV programme, Mobile (cell) phone Computer and internet in the role of visual stimuli ,Video games, Visual artists...	Various sports appliances and equipment-Sneakers, Sports outfits, Shields, Protective caps, Helmets, Goggles, Fins, Surfboard, Pad for non-swimmers, Ropes, Sailor Ladders, Trampoline, Board for the spring, Bar, Buck, Rings, Mat, Crossbar, Parallel bar, Volley ball net, Basket ball net, Goal, Cones, Rings, Hula hoop, Ball, Medicine ball, Frisbee, Ribbons, Jumping rope, Bike, Room bike, Racket, Skateboards, Skates, Skate, Skis, Treadmill, Device for rowing, other simulators professional sportsmen Coaches, Judges,	Leather, Fur, Feathers, Stone, Plastic, Metal, Sponge, Paper, Concrete, Bricks, Clay, Glass, Water, Needles, Fabrics, Wood, Art tools and materials, Different samples by which we stimulate the sense of touch.	Scented items. Soaps, Rubbers, Perfumes, Stickers, Fragrant plants, Sandalwood, Lavender, Flowers, Leaves, Smells of food and beverages, Goulash, Fish, Cheese, Juice, Tea, Animal smells, Rabbit, Dog, Bird, Horse, Human Smells, Sweat, Mouth odour, Baby smell, Various samples by which we activate the sense of smell.	Semi-Processed and Processed foods of plants and animal origin, fruit, Vegetables, Seeds, Meat, Cheese, Bread, Confectionary, Medicinal herbs, Herbs, Spices, Various samples by which we activate the sense of taste

Part of the kinaesthetic media refers to those that stimulate the sense of touch: hot, cold, sharp, rough, smooth, spiky, soft, hard, wet, tiny, huge etc. Olfactory media provide information that

stimulates the sense of smell. With the help of these media, pupils experience: pleasant, unpleasant, harsh, sweet, fresh, intensive, natural, artificial smells etc. Taste media stimulate the sense of taste. With the help of taste media, pupils experience various tastes: sour, spicy, salty, tasty, tasteless, cold, hot, exotic etc.

This classification can be conditionally understood, since certain media regardless of them being listed in less than one category in the table can provide information of various sensory areas. Besides that, media are more and more in an interactive relationship. "Today, it is difficult to establish the boundaries between media, when one medium switches to another, when they interlink with one another in all possible ways, technically becoming more and more perfect, the unique difference among them disappears" (Woolfolk 13).

Whether in class a media or multimedia will be chosen depends on didactic criteria, of which the primary aims are: developmental possibilities of the pupil, views and competencies of the teacher, level of equipment of the school as well as anticipated educational achievements of pupils. High quality learning is based on skilful combining of all types of meaning (personal, technical, non-technical), with the aim of creating a rich, material environment in the classroom which is stimulating for learning and in which, besides the teacher, pupils will have the possibility of choice of media in their class activities. This is substantiated by the research Efficiency of active and passive verbalization methods of learning of gymnastic exercises in pre-school age (Simkins), which emphasizes a more effective role of combining media of various sensory areas in relation to the usage of media of one sensory area, as well as the levels of involvement in the process of learning.

According to the results of analyses of variant and canonical discriminatory analyses, the authors conclude that applying the method of active verbalization enabled a higher quality of performance of gymnastic exercises and ground compositions, from the method of passive verbalization, and more so from the classic method of learning motoric assignments. This means that the greatest achievements were made by kids, who first learned a song off by heart,

then saw a demonstration of gymnastic programs and during a later independent exercise chanted parts of the text (active verbalization) which was linked to a certain gymnastic element. The second group of children performed the same exercise as the first group, but the last five minutes of class simply listened to the song (passive verbalization) and a description of the exercise, thus achieving weaker results. The weakest results were achieved by the control group which performed the same exercises the former two groups did, but without song, standard method of motoric learning: explaining, demonstration and exercising.

Thus, a one-sided choice of media; (e.g. just personal or exclusively electronic, digital), distances the pupils from the natural context. The natural context is extremely close to the pupils in class because of its specific developmental age and original reality. With regard to the diversity and numerousness of media, several classifications of media is listed in The Dictionary of Multimedia by Brad. With regard to the character of work in class, they are divided into: a) demonstrational (pictures, maps, drawings, schemes, graphs, charts, applications, relief, models, slides, slide shows, movies); b) teaching-working (textbooks, manuals, dictionaries, lexicons, encyclopedias, notebooks, working maps, journals); c) laboratory-experimental (refer to different apparatus and devices used for studying the laws of nature, material properties, carry out various measuring); d) manipulative (tools, equipment, mechanisms, devices); e) operative (machines and equipment for studying the process of production); f) production (machines and tools for production work).

Other classifications also exist such as e.g. with regard to the origin of teaching devices: manufactured teaching devices, teaching devices made in school, teaching devices collected from various sources, either by teachers or pupils; with regard to the level of didactic process: natural objects, manufactured natural objects and teaching devices of a symbolic character (geographical maps, charts, musical notes); with regard to place: teaching aids in nature, in production and in other facilities, in schools; with regard to perception: visual, auditory and audio-visual; with regard to function of cognition: teaching resources as a direct

source of knowledge, teaching resources as aids in indirect acquisition of knowledge. A classification into static and dynamic teaching resources, natural and artificial, standard and modern, teachers and pupils, for studying, learning, exercising etc. also exists" (Palmer and Young 3)

Various authors support various classifications of media. Research has been done in classifying media with regard to sensory types. Palmer classifies teaching resources into: visual (with regard to the didactic function – static and dynamic, with regard to dimension – two dimensional and three-dimensional), auditory, audio-visual (sound films and TV programs) and textual. Alessi and Trollip classification of media with regard to the senses is based on: textbook, visual teaching devices, auditory teaching devices, audio-visual teaching devices, manual teaching devices and auxiliary teaching devices.

Stipek classifies media into: "auditory teaching devices and aids, visual teaching devices and aids, audio-visual teaching devices and aids and computer" (23). Petrina classification of media is based on: "visual, auditory, audio-visual, textual, simulations and computer technology" (12). Classification of teaching resources by Simon, Van der Linden and Duffy comprises classic and modern teaching resources. Classic teaching resources are: verbal, textual, visual, auditory, audio-visual, manual, experimental and auxiliary technical educational resources, while in modern teaching resources he includes educational program back-ups, multimedia electronic communication, expert systems, teaching bases of knowledge, intelligent tutorial systems etc.

It can be concluded that all listed classifications contain several types of teaching media which belong to the same sense e.g. textbook is part of visual teaching resources, like all other textual media, computer is a type of audio-visual teaching resource etc. Didacticians, who frequently classify media with regard to perception, support the classification with regard to dominant senses: auditory, visual and audio-visual media. Such a classification of media is considered traditional and incomplete because it does not contain other types of perception

such as: kinaesthetic, taste and olfactory, even more so because including all senses intensifies class work. In the listed classifications, elements that are not linked to sensory types, but belong to other typologies, interfere (Collins, Hammond and Wellington).

The aim of using media in class is not to determine the percentage of its representation, but its diversity, suitability and effectiveness of usage, by which it directly influences pupils' experiences. Therefore, it is more precise, with regard to the type of sense, to classify media into:

1. Auditory – sources of knowledge which provide information by listening
2. Visual – sources of knowledge which provide information by watching
3. Kinaesthetic – sources of knowledge which provide information by movement
4. Olfactory – sources of knowledge which provide information by smelling
5. Taste – sources of knowledge which provide information by tasting. (Latchem, Williamson and Henderson-Lancett 9)

Using technical media can have negative connotations in teaching. Then we speak about technicality in didactics. Technicality in didactics raises the cult of technology "to such an extent that educational values of concrete teaching curricula are neglected. Such neglect and hypertrophying of teaching techniques reduces the class work to "useless spent time" – to the detriment of subject matter and economics of time" (Petrina). If the stated aim is not respected, one of the mistakes of using media in class can be technicality. Pupils bear the greatest harmful effects. Therefore, it is important to have and respect criteria of media and multimedia selection, in order to avoid eventual harmful effects for all.

The Evolution of Educational Television

After years of experimentation, "instructional television came of age in January 1961, when a converted DC-6 airplane beamed programs to half a million students in 10,000 classrooms across six U.S. states. Organized by the Midwest Program on Airborne Television Instruction (MPATI)" (Skolnik & Smith 80); this medium was heralded as a way to replace the classroom teacher, at least in certain areas of study.

> Over the following decades, an informal national distribution system for classroom television developed, involving public broadcasting stations, school-based cable systems, educational media centers, and teachers. Today, this network includes 190 licensed PBS stations as well as cable and network stations. Most ITV programming airs on such stations in the middle of the night, sometimes featuring a whole series at once. The programs are recorded to videotape by media specialists and librarians in the school districts served, and then made available throughout the school year to teachers. In this way, hundreds of millions of students have had access to ITV programming. (Skolnik & Smith 80)

The rapid advance of educational technology, the growth of the Internet, and the impending arrival of digital video transmission has all created new channels for ITV delivery. While there is no doubt that instructional video resources will continue to be used to enrich teaching, the route that these resources follow to reach students may change dramatically.

Accordingly, successful and productive school use of television and video has continued to gain recognition dramatically over the last decades. As the technology continues to grow both more sophisticated and more user friendly, teachers continue to become more adept at integrating these media into their instruction, particularly as it has been discovered that the use of educational video which is the focus of this study has become an effective educational tool for all students: especially effective for reaching visual learners and special populations.

Educational Television Categories

Over the years, several types of ETV have developed, each of which has been helpful. Before discussing the most recent developments, it is worthwhile to review the broad categories of ITV.

Distance Learning: This school of ETV is a direct descendant of the MPATI project. Video or real-time TV is used to conduct "live" instruction. Local classroom teachers are largely uninvolved in teaching, apart from ensuring student attendance and discussing content afterwards. Recent developments such as video-conferencing, e-mail, and chat-room messaging have introduced two-way response, improving the level of interaction between the

long distance teacher and the student. As a result, some successful applications of distance learning have evolved for specialist training, commercial settings, and students in remote locations. In the classroom, though, this form of ETV has limited application. No matter how engaging the content, such programs routinely fail to hold students' interest (Skolnik & Smith 81). Most schools use distance learning in moderation, limiting its use to unique events or highly specific subject areas.

Classroom Use of Broadcast Programming: The second form of ETV uses existing television programs in classroom instruction. "The *Nova* series and Ken Burns's *Civil War* series are examples of programs produced originally for home viewing that have been successfully used in the classroom" (Skolnik & Smith 81). According to Skolnik and Smith, "this kind of programming began to appear during the 1980s due to the proliferation of the VCR, which let teachers choose when to watch programs, which programs to watch, and which segments to showcase" (81). Though this increased the usefulness of ETV, existing programming did not always translate well for an educational setting because this mode of ETV often failed to hold classroom attention for long periods of time. What's more, if teachers decide to show small portions of a series, they must find the appropriate segment among hours of tape.

Programming Designed for the Classroom: Since the advent of the VCR, more and more programs have been produced specifically for the classroom. Whereas earlier examples of distance learning attempted to provide a video version of a traditional-style lesson, this newer type usually supplements classroom teaching. In addition, programs created specifically for classroom use can focus on specific curriculum topics.

Perhaps, rural educational systems are experiencing increased demands to ensure that students receive the same educational opportunities as their urban counterparts. In response to the increasing challenges, educational planners are turning to cooperative approaches

involving distance education and technology, for solutions. One such approach is Interactive Instructional or Educational Video, in the classroom which is the focus of this study.

The Classroom Video: Using audio-visual materials in the classroom is nothing new. "Since filmstrips were first studied during World War II as a training tool for soldiers, educators have recognized the power of audio-visual materials to capture the attention of learners, increase their motivation and enhance their learning experience" (Hovland, Lumsdaine and Sheffield, cited in CPB 18). Both the content and the technology have developed considerably since that time, increasing the availability and the value of audio-visual materials in classrooms. Content has developed from instructional television (ITV) of the 1950s and 1960s, which allowed replay of taped lectures, through educational television (ETV), intended to complement classroom instruction rather than compete with it, to educational standards-based videos designed specifically as supplemental classroom tools (Corporation for Public Broadcasting 23). Delivery technologies have also advanced, from filmstrips to cable television, to the versatility of VCRs, DVDs and laserdiscs. Finally, with the advent of digital technology, the field is evolving to newer and ever-greater potentials of adaptability in delivery.

The use of educational video and television in classrooms has thus risen steadily over the past thirty years, according to a series of studies conducted by the Corporation for Public Broadcasting. These surveys measured both patterns of use and teacher attitudes and expectations for outcomes. Not only is this technology widely used, according to the most recent study, but it is also highly valued as a means of teaching more effectively and creatively (CPB 24).

TV and Video are excellent medium for illustrating applications, describing context, and generating interest. Since it is not a truly interactive medium, though, it can neither be used to pinpoint what a student fails to understand nor remedy such misunderstandings. Here, the classroom teacher has proven to be irreplaceable (Skolnik & Smith 79). An especially

effective use of video is to engage student interest by introducing a concept that is then covered in detail during class. After the video introduction, which generally lasts from 5 to 15 minutes, the teacher has enough time to discuss the topic introduced and work with students individually to ensure comprehension.

A study of classroom use of another popular program (*Foundation for Advancements in Science and Education*) found that television, when combined with other activities, could both alter entrenched attitudes towards math and improve student performance. The research focused on the Peabody Award-winning series *The Eddie Files*, which is produced for elementary-school students (CPB 26).

> Each episode focuses on a topic from the elementary curriculum such as fractions, estimation, or statistics. In pre-test interviews, 90% of the students interviewed found math "boring." After watching episodes over a two-month period and completing lessons from the series' teacher guide, 75% of those students no longer found math boring. The number of students who wanted a career that required math increased by 14% in the second poll. This later poll also found that students were better able to define concepts covered in the TV series, more likely to give correct answers to questions, and better able to list applications of the curriculum topics that had been addressed. (CPB 28)

A study conducted by Chen and Hodder, focusing primarily on career education programming, helped underscore the elements of effective classroom television. The authors examined a ten-year track of formative and summative research conducted by the Foundation for Advancements in Science and Education (FASE), which created *Futures* and *The Eddie Files*, as well as other highly-regarded ITV programs (FASE). They concluded that “shorter programming was of higher value and greater impact and that video proved most useful when used to support, rather than replace, the teacher” (Chen and Hodder 9). Below are the lists selected ITV and Educational Video produced for youngsters’ classroom learning, according to (CPB).

Table 4; Selected Popular Television Programs and DVD Series for Young Children Learning

TV programs	**Description**	**Network**
Barney & Friends	Evoking a preschool setting, Barney the dinosaur teaches songs and dances to young children. The show focuses heavily on pro-social themes of sharing, empathizing, helping others, and cooperating.	PBS
Blue's Clues	A human host encourages viewers at home to help solve a mystery with his dog friend, Blue. The show is often repetitive and encourages interactivity by asking viewers to find clues and solve puzzles.	Nickelodeon
Bob the Builder	Bob the Builder and his construction crew face building, renovation, and repair challenges. The series often focuses on identifying a problem and making a plan to solve the problem.	PBS
Dora the Explorer	Featuring a bilingual Latina girl as the lead, Dora and her friends go on quests and help others, encouraging viewers to help out through their own actions or by telling her what she needs to know. In addition to highlighting traditional educational content such as color and shapes, Dora teaches language by repeating words and phrases in English and Spanish.	PBS
Sesame Street	Combining puppetry, live action, and animation, this long-running series focuses on a wide range of topics including the alphabet, numbers, emotion management, conflict resolution, music, dance, and healthy lifestyles.	PBS
Teletubbies	Centering on four colorful characters, the Teletubbies speak in a baby-like language and learn through play. The Teletubbies have televisions in their stomachs that show clips of real children from around the world. This program is targeted at toddlers.	PBS
Thomas & Friends	Based on a book series, Thomas the Tank Engine and his engine friends learn to work hard and be cooperative with each other.	PBS
The Wiggles	Featuring a four-man singing group for children, episodes of The Wiggles include songs and skits focused on solving a problem. The Wiggles encourages children to sing songs and move their bodies to music.	Disney
DVD series	**Description**	**Producer**
Baby Einstein	Series content covers wide range of topics including music, art, language, poetry, and science. Targeted at children starting at one month.	Disney
Brainy Baby	Educational series highlighting range of subjects including alphabet, art, music, shapes, foreign languages, and right and	Brainy Baby Company

	left brain development. Targeted at children starting at nine months.	
Sesame Beginnings	Features baby versions of the Muppets from Sesame Street. The focus is on encouraging interactions between child and caregivers. Targeted at children starting at six months.	Sesame Workshop

Excerpt from: (CPB 2004:18)

The above table details the various types of educational television (ETV) programmes aired on Televisions. Although, this programmes are foreign (ETV) programmes but they are often aired too in our local television stations in Nigeria through syndication. It is from this educational television (ETV) programmes that Educational Videos that covers and captured the Nigeria national educational curriculum are produced to meet popular demand. Although, this Educational Videos which is the focus of this studies were initially produced for home consumptions but school are beginning to utilize them in the classroom. Two of such Educational Videos; *Nice Kids English Teaching, Love Kids English Teaching* and *Children Mathematics Learning Collections* were used as teaching material in this study.

2.3.2 The Role of Multimedia Drama Activities in Learning

Using stories to support learning has ancient roots. In countries where rich oral traditions still exist, folktales and stories have moral messages and have been a basic part of an informal education. We can find examples throughout history. The Greek playwright Euripides wrote one of the earliest "Antiwar" plays, *The Trojan Women*, to address the evils of war, and early British and American fiction writers used the wisdom of biblical texts to promote moral education (Brown and Meeks 31).

Today, film and television are primary means for storytelling from which, as in earlier eras, people learn informally. A good deal of evidence exists proving that these media can encourage adoption of values, beliefs, and behavior across a range of topics—adult literacy, sexual responsibility among teens, health education, and volunteerism (Rushton as cited in Brown and Meeks 32). Over the past 30 years, a number of film and television producers have

intentionally sought to educate the public about important issues using these media. “Some examples include the 1970s television series *Roots*, about the history of African-Americans’ journeys from slavery to freedom; *Schindler’s List*, about the holocaust; *Mississippi Burning*, about the civil rights movement in the South; and *Cry Freedom*, about apartheid in South Africa” (James 7).

Storytelling and drama share a number of features which make it natural to integrate them during lessons. Both build on children’s innate capacity for fantasy and imaginative play, and even very young children can differentiate between the conventions of a story or drama and real life. Through stories and drama, children develop understanding of themselves and the world around them. The distance afforded by characters and events which are not real also helps children to explore significant issues which are relevant to their daily lives, in a way that is safe and enjoyable.

In storytelling and drama, the usual norms of time, place and identity are temporarily suspended as, for example, in a story which spans a hundred years yet takes three minutes to tell, or a drama activity which transforms the classroom into a ‘jungle’ and all the children in it to ‘hungry lions’. Storytelling and drama are above all shared communal classroom events which engage children’s interest, attention and imagination and develop their language skills in a holistic way. They also appeal to children with different intelligences and learning styles and provide a framework for fostering social skills and attitudes, such as active listening, collaborating, turn-taking and respect for others, in a positive way.

Learning through Drama: Fundamentally, most children start school familiar with stories and narrative conventions in their own language and even in English Language; quickly transfer this familiarity into a willingness to listen to and participate in stories in English. Stories provide a natural, relevant and enjoyable context for exposure to language and an

opportunity to familiarize children with the sounds, rhythm and intonation of English. The discovery and construction of meaning is supported through things such as visuals, mime, gesture, voice and characterization, and children also develop learning strategies and thinking skills, such as predicting, hypothesizing, guessing and inferring meaning. Stories help young children to develop concentration skills and also aspects of emotional intelligence, such as empathy and relating to other people. Stories also provide a springboard for a wide range of activities which develop language, thinking skills, positive attitudes and citizenship, as well as appreciation of other cultures, or understanding of content from other areas of the curriculum. As children increasingly develop their ability to understand, retell, act out and/or create their own stories in English, this also has a positive effect on their motivation, confidence and self-esteem.

Drama provides opportunities for multi-sensory, kinaesthetic responses to stories and engages children in 'learning by doing' at a number of different levels. At a basic level, through listening and responding to storytelling and doing short, introductory drama activities, children use mime, sounds, gestures and imitation to show their understanding and to make connections between language and corporal expression. These helps young children associate actions, words and meanings and memorize key language in a natural and enjoyable way. As children become familiar with the story, more extended drama activities provide opportunities for recycling the language it contains through retelling or acting out, either by the children themselves or by the children using puppets. In these activities, the use of drama provides a focus and support for children to use (some) language from the story in an independent way and also contributes to building up their confidence and self-esteem. At a more sophisticated level, the use of drama techniques such as hot seating, role play or thought tunnel provides opportunities for children to go beyond the story and explore the issues, problems or moral dilemmas that it contains. This not only provides opportunities for children to use language

they know beyond the story script within a clearly defined framework but also encourages them to develop critical and creative thinking skills and to work with others in a collaborative way.

In the wake of the 21st, we observe both receptivity and active involvement of community resources in the education of children and young people. One of the most effective resources is theatre. The use of drama as a tool for teaching is not new: historically, both drama and theatre have perhaps long been recognized as potent means of education and indoctrination. The ways they are used today, however, are new, and they differ in a number of respects from the ways they have been used in the past.

Most familiar to us in the Western world is the theatre of ancient Greece, which developed from celebration and dance into a golden age of theatre. Athenian education in the Fifth Century B.C. was basically centred on music, literature, and dance. Physical activities were emphasized, whereas music included the study of rhythms and harmony as well as the instruments of the time. Because dance was basic to religious festivals, it was stressed, and the chorus of young people received a rigorous training subsidized by Choregoi and other wealthy citizens. Dramatists were highly respected, and drama was a major educational force. Plato, in *The Republic*, advocated play as a way of learning: if only poets and playwrights chose appropriate subject matter, which would benefit the audience(s). Aristotle urged education in the arts, distinguishing between activities that were means and those that were ends.

The medieval church taught through the medium of mystery plays and, in so doing, helped to restore theatre to its proper place as a great art form. By the last half of the sixteenth century, drama was an important part of the curriculum of the English boys' schools; not only the reading but the staging of classic plays thrived. We could go on through the centuries, nation by nation and culture by culture, citing examples of the various ways drama and theatre

have been used to inform, inspire, entertain, and indoctrinate. The United States has only recently discovered the relationship between theatre and school.

Indeed, the 20th century dovetailing into the 21st century was well advanced in the arts but this has had no significant impact on Nigeria educational system. Although the arts are originally designed into the curriculum; but usually the schools take them as extracurricular activities or as minor subjects, rarely placed on a par with the so-called solids. On the secondary school level, they were given even less emphasis. All the arts tended to be what the teacher made them; thus they only reflect the teacher's background, interests, and attitude. In the minds of many, theatre and dance were even questionable as part of a young person's education. Drama, in fact, followed music, athletics, and the visual arts into the curriculum. The Federal Government National Policy for Education emphasized Arts Education, but there are still uneven acceptance and implementation of these standards in school and are therefore substituted for the science subjects.

However, Drama-in-Education and Theatre-in-Education have taken as its centre the notion of putting on plays, and encouraging children to see themselves as imaginative actors. Influenced by ideas from progressive and liberal education about the right of the child to learn by doing, exploring and expressing, creative dramatics grew as an alternative to traditional children's theatre and from a critique of letting children mechanically learn and perform texts without relevance for themselves.

Significant Research of Multimedia in the field of Education

Since the USA is one of the most developed countries in the world, it was the first to start with research into media application in teaching. Therefore, the study reviews work of researchers who have contributed to exploring the phenomena of media in learning. Pioneers in the research of media in America were Lashley, Watson (1922) and McClusky (1924). The subject of their interest was the conceptualization of research variables. The reputable scientific

journal at the time AVCR (AV Communication Review) published by Allen W. H. (from 1953- 1969) contributed to the popularization of scientific insights into the field of media didactics (William, Sawyer and Hutchinson 157). Lumsdaine, named the following thirty years a period of "comparative-evaluative research" (William, Sawyer and Hutchinson 157). This type of research was based on didactic value of the emergence of new audio-visual media in relation to conventional methods of teaching. Other research directions that also surfaced e.g. research of radio schools, mass media and their commercial effects, surveying public opinion, calculation of statistical data on the population and many others did not have any connection with research on class work, nor was it researched by pedagogues; this was done by social psychologists.

The next type of research studied the problem of reading skills, readability of media and printing formation of textual media. One of the leading American researchers of teaching media according to William, Sawyer and Hutchinson is W. Allen who points out the significance of earlier research of teaching media: in directing attention to the efficacy of media in transferring information, comprehensive research of the characteristics of teaching media and their diverse possibilities of use, which should be studied under controlled conditions.

Following communication research, techniques and instruments for analyzing the responses of subjects evolved. Research strove to create clearer pictures of convincing and motivating roles of communication. Military institutions made a valuable contribution in researching teaching media during the 1st and 2nd World Wars as well as in the inter-war period, especially in the field of film impact. The decade in which the popularity of film was taken over by television and where school TVs spread were the 50s. The efficacy of using televisions in class was highlighted as a new valuable tool in relation to the previous frontal conventional teaching methods.

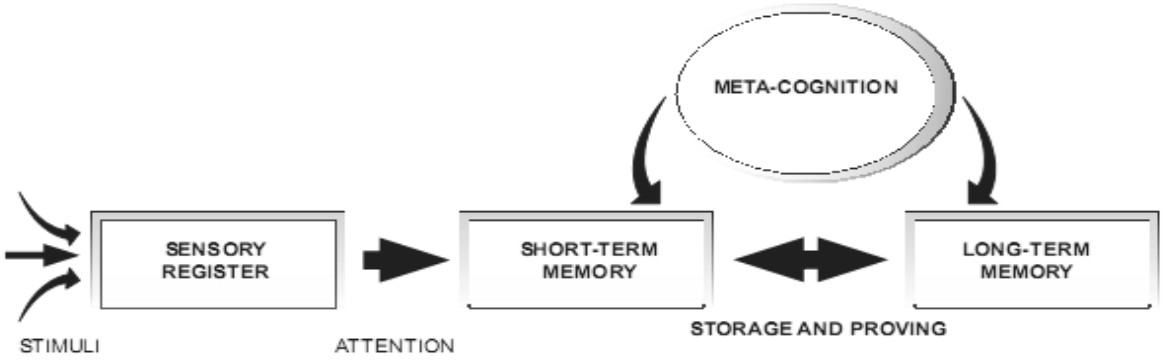
In the 60s the real challenge was class programming which was credited for research in the field of planning, sequencing and structuring of media as well as individual two-way communication. Towards the end of the 60s and the beginning of the 70s, Gagne (1965), Salamon and Snow (1968), Briggs (1970) and Allen (1970) left their mark on the period of research in stimulation, assignment and pupils in a deeper sense of understanding the values of class media. Briggs (1968), Gagne and Rohwer (1969), Frase (1970) and Rothkopf (1970) contributed to researching the right way of using class media based on research in the field of class programming, especially in the field of ways of presenting subject matter and hierarchical structure of subject matter (William, Sawyer and Hutchinson 161). The intention of "comparative-evaluative research" stimulates the principal idea of markets that each newly invented media has a superiority over the existing media with regard to the possibilities it provides, thus modernizing the class work.

Lately, it has been difficult to limit ourselves to one country since, thanks to electronic technology, scientists more than ever are connected all across the world and scientific practice involves team projects whose leaders are representatives from different countries. It is obvious that the globalization trend in the economy affects the scientific field. Besides research in the field of media structure and the possibilities for their use in class, research of cognitive possibilities for teaching pupils is highlighted. "Today, models of human information processing are at the centre of a cognitive approach to pupils studying and memorizing. Information processing is not only a term for a unique theory but includes a series of theoretical understanding about how we perceive stimuli from our surroundings, how we process the information in our short-term memory, how we connect it with our acquired knowledge, how the new knowledge is stored in our memory and how it is retrieved. These approaches are applied in analyzing learning, memorizing, problem-solving, visual and audio perception, cognitive development and artificial intelligence." (William, Sawyer and Hutchinson 161) The cognitive theory of multimedia learning developed from the theory of

information processing towards the end of the 60s of the 20th century. The theory of information processing represents a simple and general model of learning which is made up of stimuli, attention, storage and retrieval of information. The most effective model of information processing is the model of storage first proposed by Atkinson and Shiffrin (1968) (cited in William, Sawyer and Hutchinson 159).

That model encompasses three linked sub-systems of which each carries out its own special function: a sensory register or receiver of stimuli, short-term and long-term memory.

Fig 2: Model of memory and learning as a way of information processing by (William, Sawyer and Hutchinson 173)



Information processing begins when an external stimulus triggers a certain sense. Sensory register then accepts the information by stimulating the sense and holds it for a very short period in its original form. Recognition and perception follows. This is the process during which we recognize the meaning of each stimulus in accordance in the previously mentioned rules of perception. Although the information in the sensory register is held for a very short period of time, 1 to 2 seconds, in this period we decide whether to further process the information. Using multimedia in class, the pupils are exposed to audio-visual stimuli.

However, whether the pupils will pick up on the stimuli depends on them paying attention in class. The process of attention plays a major role in determining whether the information in our sensory register will be passed on. At every moment our senses are exposed to all kinds of stimuli – colours, sounds, smells etc. “Most of these stimuli are superfluous i.e.

we cannot pay attention to all of them. Attention is determined as the process of choice of certain stimuli from all surrounding stimuli that we are constantly exposed to" (William, Sawyer and Hutchinson 176).

Mayer, R. E. professor of psychology at the University of California in Santa Barbara, *developed a cognitive theory of multimedia learning* from the theory of information processing. In the cognitive theory of multimedia learning (also known as the theory of separated attention) Mayer deals with research in the field of acquiring and reorganizing cognitive structures in the process of information modification and storage, the impact it has on the pupil's environment and the role of the teacher. The basic hypothesis of research of multimedia learning is that multimedia educational messages, formed in the direction of explaining the way that the human mind functions, with the aim of effective learning (compared to learning which is non-effective). In multimedia learning, we have three memory storages: sensory memory, short-term memory and long-term memory.

Words and pictures from the outer world, as multimedia presentation, through the ears and eyes, enter the sensory memory. The main activity of multimedia learning occurs in the short-term memory which holds it and manages knowledge in the active consciousness. The left part of the short term memory shows the rough material which enters the short-term memory. The arrow from the sound to the picture shows the mental conversion of sound into a visual image while the arrow from the picture to the sound represents the mental conversion of the visual image into sound. The cognitive theory of multimedia learning is based on the model which is made up of selection, organization and interaction of information through: selection of important words for processing in the verbal short-term memory, selection of important images for processing in the visual short-term memory, organization of selected words in the verbal thought model, organization of thought images into the visual thought model and integration of verbal and thought presentations with previous knowledge. Cognitive theory of

multimedia learning is based on the audio-visual learning model. There are three basic assumptions (Mayer 32-37):

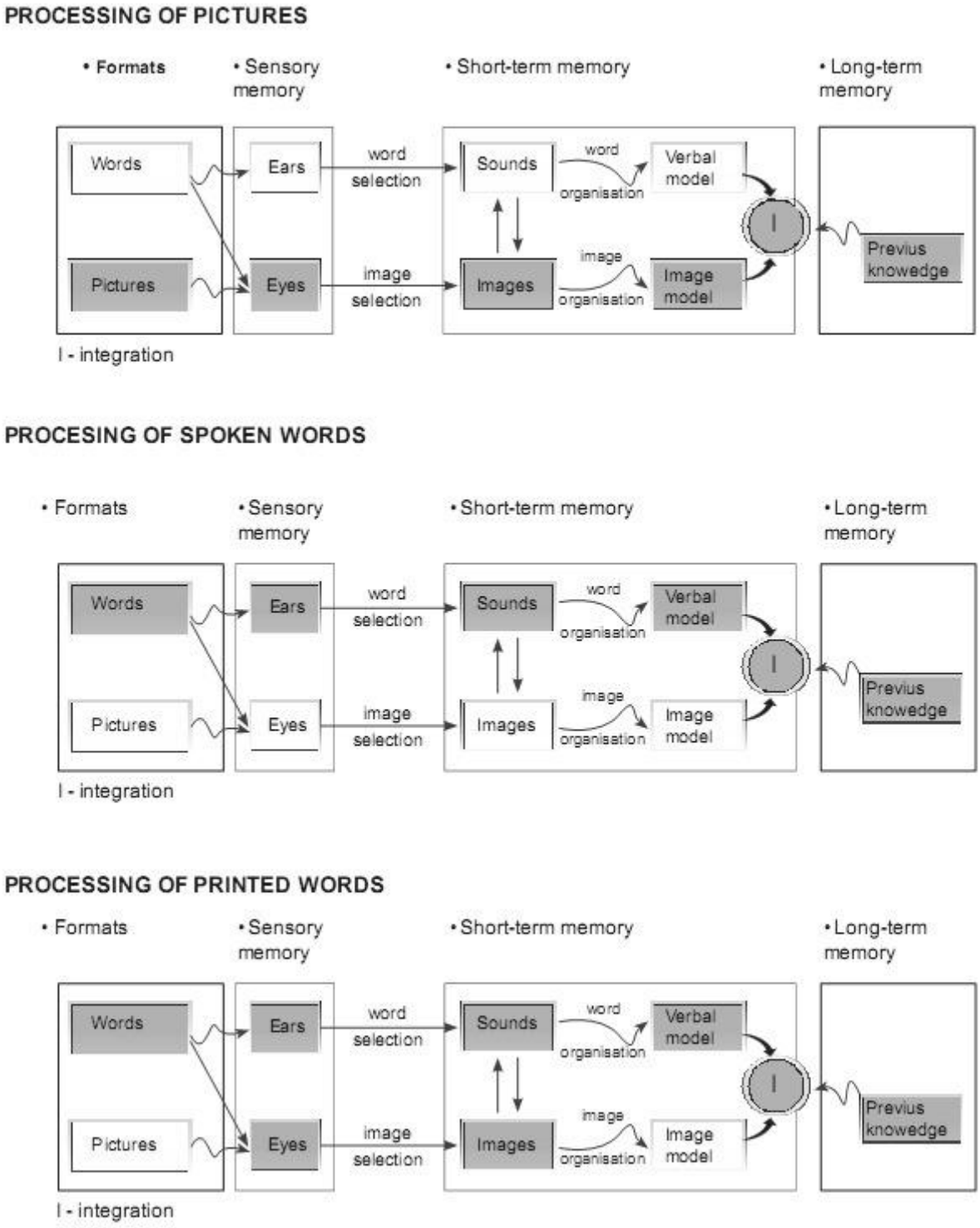
I. Processing of visual and audio information occurs through different and separate "channels"

II. Each piece of information in the processing channel is limited in its possibilities of information processing

III. Processing of information in the channels are an active cognitive process is formed into a harmonious mental presentation.

The main cognitive process of multimedia learning is shown with arrows which signify selection of words, selection of images, organization of words, organization of images and their integration. These five cognitive elements of the process facilitate learning through the procedure of small segments: selecting words and images from the first spoken sentence and the first few seconds of animation, organizes them and integrates them thus repeating the process on the following example. By doing so, in multimedia display of words and images, audio and iconic display from the sensory memory are transformed into sounds and images in the short-term memory, thus creating a verbal and image model in the short-term memory, which connects with previously-acquired knowledge from the long-term memory. Mayer comparatively demonstrates learning in an audio, visual and audio-visual manner. He outlines three types of information processing: processing of pictures, processing of spoken words and processing of printed words.

Figure 3: Processing of pictures, spoken and printed words (Mayer 43)



The flow of *picture processing* is shown by the shaded boxes. If, for example, we show the pupils a photograph (static picture) and animation (dynamic image) which in sensory memory without any effort, is briefly registered by the eye, then an active cognitive process follows

which is consciously controlled by the pupil. If the pupil pays attention to the rapid flow of pictures registered by the eye, part of the pictures will be shown in the short-term memory. This deliberate processing makes up picture selection. Since the short-term memory is full of different pictures, the following active cognitive process includes organization of those pictures into a coherent structure, thereby creating an image model which the pupils construct as a flash (photographs) or an organized flow of pictures (animation). Finally, active cognitive processing links new impressions with previous knowledge. *Processing of spoken words* is shown in the shaded boxes (as shown in the diagram). When the computer or Television says words in the multimedia presentation, the ears register them in the sensory memory and so that information is temporarily stored in the audio sensory memory. If a pupil pays attention to the sounds coming through the ears, some of the incoming sounds will be selected in the audio short-term memory. Such accumulated words should be organized into coherent mental structures in the verbal model of short-term memory. At that moment, words are transformed from sound into their meaning which, in connection with previous knowledge, completes the transformation.

While the processing of pictures occurs through the visual channel, the processing of spoken words occurs through the audio channel and the *processing of printed words* occurs through the audio-visual channel. The arrow from pictures towards sounds in the short-term memory shows that a pupil can mentally create sound that suits a visual image and vice verse; mentally he can create a picture that corresponds to words. Printed words are shown visually so the processing of words begins with the eyes. Certain words, through selection of their pictures, are directed into the short-term memory as parts of pictures. On a mental level, they are transformed into sounds which are processed, like spoken words, into new impressions with previous knowledge (Mayer 42-44). Mayer outlines several principles of multimedia teaching with which a higher quality of learning is achieved:

- ***The principle of multiple presentations****:* while explaining, it is better to use words and images rather than only images, e.g. multimedia effect;
- ***The principle of subject matter involved****:* with multimedia explanations, we create a correspondence between words and the image.
Pupils master the subject matter better through simultaneous explanation with words and images rather than successively;
- ***The principle of divided attention****:* during multimedia explanation, it is better to use words through audio rather than visually (text on the screen);
- ***The principle of individual differences****:* the former principles depend on individual differences among pupils. Multimedia effect is stronger with pupils of a lower level of knowledge;
- ***The principle of coherence****:* is based on short summaries of explanations which should be organized as productively as possible. (97-201)

The stated principles are essential for this research paper as they represent guidelines of multimedia learning. Apart from that, each stated principle of multimedia formation opens new possibilities for future research.

Cognitive Theory of Multimedia Learning and the Human Assimilation Process

Multimedia learning is a cognitive theory of learning which has been popularized by the work of Richard E. Mayer and others. Multimedia learning happens when we build mental representations from words and pictures. The theory has largely been defined by Mayer's cognitive theory of multimedia learning. The cognitive theory of multimedia learning was popularized by the work of Richard E. Mayer and other cognitive researchers who argue that multimedia supports the way that human brain learns. They assert that people learn more deeply from words and pictures than from words alone, which are referred to as the multimedia principle (Mayer 47).

Multimedia researchers generally define multimedia as the combination of text and pictures; and suggest that multimedia learning occurs when we build mental representations from these words and pictures (Mayer 49). The words can be spoken or written, and the pictures can be any form of graphical imagery including illustrations, photos, animation, or video. Multimedia instructional design attempts to use cognitive research to combine words and pictures in ways that maximize learning effectiveness.

The theoretical foundation for the cognitive theory of multimedia learning (CTML) draws from several cognitive theories including Baddeley's model of working memory, Paivio's dual coding theory, and Sweller's Theory of Cognitive Load. As a cognitive theory of learning, it falls under the larger framework of cognitive science and the information-processing model of cognition. The information processing model suggests several information stores (memory) that are governed by processes that convert stimuli to information (Moore, Burton and Myers 21). Cognitive science studies the nature of the brain and how it learns by drawing from research in a number of areas including psychology, neuroscience, artificial intelligence, computer science, linguistics, philosophy, and biology. The term *cognitive* refers to perceiving and knowing. Cognitive scientists seek to understand mental processes such as perceiving, thinking, remembering, understanding language, and learning. As such, cognitive science can provide powerful insight into human nature, and, more importantly, the potential of humans to develop more efficient methods using instructional technology (Sorden 11).

Key Elements of the Theory: The cognitive theory of multimedia learning (CTML) centers on the idea that learners attempt to build meaningful connections between words and pictures and that they learn more deeply than they could have with words or pictures alone (Mayer 47). According to CTML, one of the principle aims of multimedia instruction is to encourage the learner to build a coherent mental representation from the presented material. The learner's job is to make sense of the presented material as an active participant, ultimately constructing new knowledge.

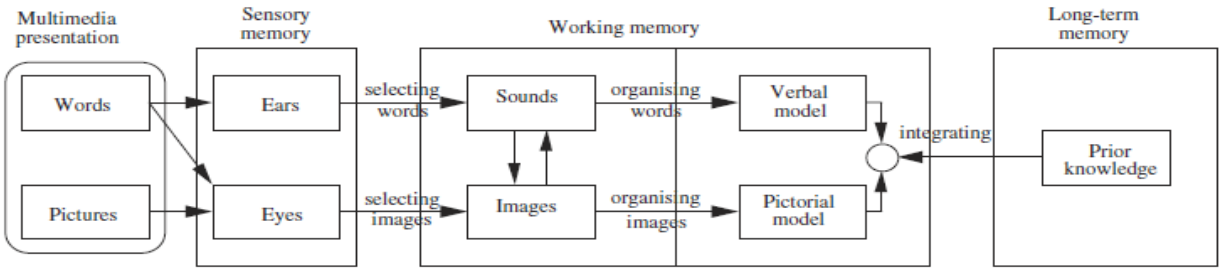
According to Mayer and Moreno (19) and Mayer (23), CTML is based on three assumptions: the dual-channel assumption, the limited capacity assumption, and the active processing assumption. "The dual-channel assumption is that working memory has auditory and visual channels based on Baddeley's theory of working memory and Paivio's; Clark and Paivio dual coding theory" (Cited in Mayer 47). Secondly, the limited capacity assumption is based on cognitive load theory (Sweller 13) and states that each subsystem of working memory

has a limited capacity. The third assumption is the active processing assumption which suggests that people construct knowledge in meaningful ways when they pay attention to the relevant material; organize it into a coherent mental structure, and integrate it with their prior knowledge (Mayer 56).

The Three Store Structure of Memory in CTML: CTML accepts a model that includes three memory stores known as sensory memory, working memory, and long-term memory. Sweller defines sensory memory as "the cognitive structure that permits us to perceive new information, working memory as the cognitive structure in which we consciously process information, and long-term memory as the cognitive structure that stores our knowledge base" (15). We are only conscious of information in long-term memory when it has been transferred to working memory. Mayer states that "sensory memory has a visual sensory memory that briefly holds pictures and printed text as visual images; and auditory memory that briefly holds spoken words and sounds as auditory images" (52). Schnotz refers to sensory memory as sensory registers or sensory channels and points out that though we tend to view the dual channel sensors as eye-to-visual working memory and ear-to-auditory working memory, that it is possible for other sensory channels to introduce information to working memory such as "reading" with the fingers through Braille or a deaf person being able to "hear" by reading lips (32).

Working memory attends to, or selects information from sensory memory for processing and integration. Sensory memory holds an exact sensory copy of what was presented for less than 25 of a second, while working memory holds a processed version of what was presented for generally less than thirty seconds and can process only a few pieces of material at any one time (Mayer 14). Long-term memory holds the entire store of a person's knowledge for an indefinite amount of time. Below is a diagrammatic representation of how memory works according to Mayer's cognitive theory of multimedia learning.

Fig 4: Mayer's cognitive theory of multimedia learning



Mayer's Cognitive Theory of Multimedia Learning

Mayer further states that there are also "five forms of representation of words and pictures that occur as information is processed by memory and each form represents a particular stage of processing in the three memory stores model of multimedia learning" (18). The first form of representation is the words and pictures in the multimedia presentation itself. The second form is the acoustic representation (sounds) and iconic representation (images) in sensory memory. The third form is the sounds and images in working memory. The fourth form of representation is the verbal and pictorial models which are also found in working memory. The fifth form is prior knowledge, or *schemas*, which are stored in long-term memory.

Furthermore, according to Cognitive Theory of Media Learning (CTML), content knowledge is contained in schemas which are cognitive constructs that organize information for storage in long term memory. Schemas organize simpler elements that can then act as elements in higher order schemas. As learning occurs, increasingly sophisticated schemas are developed and learned procedures are transferred from controlled to automatic processing. Automation frees capacity in working memory for other functions. This process of developing increasingly complicated schemas that build on each other is also similar to the explanation given by Chi, Glaser, and Rees for the transition from novice to expert in a domain.

Mayer further posits that meaningful learning from words and pictures happens when the learner engages in the following five cognitive processes:

1. Selecting relevant words for processing in verbal working memory

2. Selecting relevant images for processing in visual working memory

3. Organizing selected words into a verbal model

4. Organizing selected images into a pictorial model.

5. Integrating the verbal and pictorial representations with each other and with prior knowledge. (55)

Multimedia in Education and Constructivism Theory of Learning

Constructivism Learning Theory is another learning theory that lends credence to the use multimedia in the classroom. For constructivism it could be said that it is an educational philosophy which states that there is not only one single reality; there are many realities which are experienced individually. The intellect is a primary source of knowledge and reality is built on its foundations. Such an educational philosophy also has its attitude in relation to multimedia. Constructivists' state:

> Let's enjoy ourselves today and be informed through the images of the media which are the reality of another order and no longer from personal experience or the experience of our nearest. We are no longer interested in the background to the events whose truth, in fact, would relate to those events. If for a moment we perhaps thought that the media is a mirror of society, today it is clear: television is a "social apparatus" and society has become the reflection of that apparatus. (Clark, Nguyen and Sweller 32)

Constructivism is a theory which has developed in several directions. Individual constructivism advocates the idea that the pupil builds knowledge on the basis of his experiences, the results of learning come from personal interpretation of knowledge, and learning is an active process which is developed on the basis of experience. Social constructivism describes learning as collaborative, where the meanings of different perspectives are mutually exchanged. Contextualization propagates situational learning where the thinking is the real-life context wherein it is applied.

Real-life situations which are familiar and normal for the pupils are shown, i.e. authentic learning; although, all constructivists do not include contextualization as part of their

philosophy (Pitcher, Feinburg, and Aleksander). Radical constructivism emphasizes that every pupil is unique and the teacher does not know what the pupil needs or wishes to learn; thus, “they do not advocate aims, prepare completed subject matter in advance and help in learning or any other restriction” (Pitcher, Feinburg, and Aleksander 23). Moderate constructivism emphasizes that personal construction of knowledge is not immediately responsible for development of the pupil's environment and that leaving all information of teaching to pupils is an unrealistic burden in the important task of mastering the aims of the curriculum. A constructive view of learning proposes at least five teaching principles. Norton and Wiburg identify these teaching principles as:

1. Problem-solving important for pupils: important problems do not have to be important earlier for the pupils. All pupils in the class are not interested in learning the construction of words, biological cycles or the historical band of time, but the majority of them can help in building understanding of significant themes.

2. Structural learning around primary terms: when the constructive teacher in the class program organizes information around the conceptual framework of the problem, questions and conflicting situations as the pupils are involved the most when problems and ideas are shown holistically rather than in separate, isolated parts.

3. Seeking and evaluating the pupil's viewpoint: the pupil's viewpoint is a window into their understanding. Awareness of the pupil's viewpoint helps the educators to challenge the pupils in creating an experience of contextual and meaningful learning. Each pupil's viewpoint represents an entrance door to individual education.

4. Adaptation of subject matter to the pupil: learning is advanced when the cognitive, social and emotive needs are accessible. Some kind of relations has to exist between the requirements of the curriculum and the assumptions of what the pupils will gain.

5. Assessment of the pupil's learning within the context of teaching: the creative assessment of learning from the constructive perspective is evaluated by the pupil's

> cognitive functioning, his aptitude and the relation status of teacher – pupil. The pupil's understanding prior to revealing right or wrong becomes the main issue with the teachers. The pupil's understanding becomes a place of various types of intervention which lead to the pupil's constructions of new understanding and mastering new skills. Assessment is used in favour of the pupil rather than by a calculating machine. The pupils construct knowledge individually and socially in the classroom. Knowledge is observed as an interdependent idea. In the class of pupils, connections of personal experiences of each pupil in the group are observed. Reality is constructed rather than being revealed. (178)

Along with a holistic manner of thinking on the nature of learning, it is thought that knowledge cannot exist outside the pupil. The process of learning has to be considered with experiences and contexts which the pupil finds themselves in while they study. Therefore: today we all know that the class and teaching of individuals will be more successful if the pupil is less taught, if he learns more, if he is more "exposed" to personal activities of different types and various levels of complexities. That is why planning activities personally is not the most difficult for the teacher but planning activities of the pupils by which they learn i.e. modifying the subject matter as they go along. The pupil, namely, does not acquire ready-made knowledge. However much he comes to a ready-made and final form of it, he must in his own personal way digest it, creating thus personal experience. That is why in class learning situations are of great significance (Norton and Wiburg).

Constructive learning is described as construction of pupils in understanding the importance triggered by their own personal experiences, accompanied by their understanding. "Many others have identified the characteristics of a constructive learning environment. D. Jonassen, for example, sums up and gives a deeper meaning to constructivism in shaping teaching as:

1. Providing multiple representation of reality
2. Presents a natural complexity of real life
3. Focuses on the perceptual construction and not reproduction
4. Presents authentic works (contextual rather than abstract class work)
5. Reflects the real world, a learning environment through spontaneous methods rather than determining class tasks in advance
6. Stimulates the practice of reflection
7. Provides context and meaningfully dependent insights of constructs
8. Supports collaborative construction of knowledge through social practice (cited in Norton and Wiburg 33-34)

Multimedia is an ideal device for presenting reality to the pupils. In many media combinations, the pupils are provided with possibilities of individually experiencing the presented reality. A multimedia environment stimulates the pupils and further encourages the pupil's individual experience of the world and freedom of choice of the media by which he/she most effectively learns. For example: if the teaching aim is acquisition of new knowledge about a butterfly, then the teacher will create external motivation for learning and give the pupils opportunity to: praise, describe, draw, study from an Encyclopaedia or multimedia learning tool, count all the parts of the butterfly, compare it to other animals, imitate its movements, collect stamps with butterflies on them, go into the school yard and try to spot a butterfly; they do not have to do all these activities but choose which one to do.

The significance of multimedia stimulation and semantically rich transfer of information is in providing possibilities for self actualization i.e. affirmation of all the pupils' needs in class by which they acquire new knowledge, develop skills, habits and form their own opinions. The meaning of constructivism is to assure multiple representation of reality is that reality is a construction in an individual's brain. Each brain develops its own reality. This is why we talk about individual realities and possibilities of multiple experiences of the given reality. Observation and description of "reality" is determined by the pupils, who create unique, authentic class activities. It is more important to ask the pupils for their own opinions than to traditionally demand a mechanic reproduction of the subject matter.

When the pupil understands the purpose of learning focused on self-growth i.e. self-development, learning has a deeper meaning. The process of learning itself is based on seeking, comprehending, recognizing, selecting, using i.e. applying information and interacting with already existing information. The process of learning differs from pupil to pupil and is compatible with their individual developmental possibilities. Therefore, some pupils learn faster, others slower. Styles of learning, levels of acquiring information, abilities to apply knowledge in the same, similar and various problem-solving situations, all differ.

Empirical Multimedia Results and Applications

Mayer has conducted a decade's worth of research investigating the nature and effects of multimedia presentations on human learning. These effects are summarized below with relative practical applications.

Table 5: Empirical Multimedia Results and Applications

Empirical Results	Practical Application
Multimedia Principle: Students learn better from words and pictures than from words alone.	On screen animation, slide shows, and narratives should involve both written and oral text and still or moving pictures. Simple blocks of text or auditory only links are less effect than when this text or narration is coupled with visual images. (Sample example)
Spatial Contiguity Principle: Students learn better when corresponding words and pictures are presented near rather than far from each other on the page or screen.	When presenting coupled text and images, the text should be close to or embedded within the images. Placing text under an image (i.e., a caption) is sufficient, but placing the text within the image is more effective. (Sample example)
Temporal Contiguity Principle: Students learn better when corresponding words and pictures are presented simultaneously rather than successively.	When presenting coupled text and images, the text and images should be presented simultaneously. When animation and narration are both used, the animation and narration should coincide meaningfully. (Sample example)
Coherence Principle: Students learn better when extraneous words, pictures, and sounds are excluded rather than included.	Multimedia presentations should focus on clear and concise presentations. Presentations that add "bells and whistles" or extraneous information (e.g. to increase interest) impede student learning. (Sample example).

Modality Principle: Students learn better from animation and narration than from animation and onscreen text.	Multimedia presentations involving both words and pictures should be created using auditory or spoken words, rather than written text to accompany the pictures. (Sample example)
Redundancy Principle: Student learn better from animation and narration than from animation, narration, and on-screen text.	Multimedia presentations involving both words and pictures should present text either in written form, or in auditory form, but not in both. (Sample example)
Individual Differences Principles: Design effects are stronger for low-knowledge learners than for high knowledge learns and for high spatial learners rather than from low spatial learners.	The aforementioned strategies are most effective for novices (e.g., low-knowledge learners) and visual learners (e.g., high-spatial learners). Well structured multimedia presentations should be created for they are most likely to help.

(Mayer 152 – 162)

2.3.3 Research Evidences of Learning through Educational Television and Video

In the era of "No Child Left Behind", any educational initiative must result in increased student achievement as measured by systematic, empirical research. Television has been evaluated for over 50 years for its educational value, and an ever-increasing body of research indicates that television and video are effective teaching tools, with positive outcomes in both academic and affective learning. A survey of the educational TV and Video research conducted in 2004 by the Corporation for Public Broadcasting concluded that "children's viewing of educational television has been shown to support significant and lasting learning gains" (2) and that "a positive relationship has been found between childhood viewing of educational television and cognitive performance at both preschooler and college levels" (CPB 2). The largest body of research has been conducted on the impact of educational television and video on young children and their early literacy skills. Below are few research evidence of learning through educational video and television.

Causal relationship between children's viewing of *Sesame Street* (the most extensively researched educational television program) and their academic and cognitive development has been documented for a period of over 35 years. Fisch summarizes studies conducted since the

early 1970s, which "provide powerful evidence for the educational effectiveness of *Sesame Street*" (11). Among preschoolers, heavy viewers of *Sesame Street* showed significantly greater growth in a variety of academic skills and in school readiness. These effects have long-term positive benefits for students, as shown by a "re-contact" study that found middle and high school students who had watched *Sesame Street* and other educational TV as preschoolers had higher grades and showed higher academic self-esteem that peers who had not watched educational television (Fisch).

A study on the impact of the early literacy program *Between the Lions* found that kindergarteners who watched this program outperformed their peers by nearly 4 to 1 on specific program content, and that they were also able to transfer this content to show significantly improved growth in key early literacy skills and overall reading ability (Linebarger, Kosanic, Greenwood and Doku 299). A later study concluded that watching the program, combined with supporting classroom and at-home activities, helps low income children, children in rural areas and children who speak English as a second language significantly outperform control groups on several key reading skills (Linebarger, Kosanic, Greenwood and Doku 302). In a study recently reported in the U.S. Department of Education's, the television program *Arthur* was shown to have a positive effect on the language development of English language learners.

Furthermore, varieties of other studies have supported the use of video with older students and in a variety of content areas and social skills. Some of these include:

(A.) A study by Rockman et al. of the academic impact of home and school viewing of *Bill Nye the Science Guy* showed that students who watched the program were able to provide more complete and complex explanations of scientific concepts after viewing the show. Additionally, the gaps in knowledge base between boys and girls and between minority and majority students were smaller and closer to parity after viewing the program (cited in CPB 23).

(B.) A study of the impact of *Cyberchase* on children's problem-solving skills found that viewers outperformed non-viewers in solving problems and produced more sophisticated solutions (Fisch 13).

(C.) In two unrelated studies, the use of video to "anchor" instruction to a shared classroom experience resulted in improved vocabulary use, greater understanding of plot and characterization and increased ability to draw inferences based on historical information (Barron 23).

(D.) A six-week study on the use of instructional television with eighth grade students found that students in the classes which included the television programming outperformed the control groups in test scores, writing assignments, in variety and creativity of problem-solving skills, and in their engagement in class discussion (Barnes 38).

Sesame Street: Without a doubt, *Sesame Street* is one of the best-known examples of merging education and entertainment. From its conception in 1968, the program sought to be a very different kind of children's television series. It was different in its high production values, its topics, and its instructional goals. It was revolutionary in its use of animated characters to breathe life into its educational curriculum.

Sesame Street's commitment to research was also revolutionary. The earliest research was done in-house or commissioned by the CTW (Children's Television Workshop), now called the Sesame Workshop (James 10). Later researchers added to this pool so that "collectively, there is now more research on the effects of *Sesame Street* than for any other television program or series in the entire history of the medium" (Mielke 83; cited in James 11). *Sesame Street* was among the first to conduct research during production to help make decisions on how to better meet the educational goals of the program. Palmer and Fisch describe one instance of how such formative research was used:

> Data on this segment, and others like it convinced both producers and researchers of the importance of considering not only the attractiveness of the material and not only what children could comprehend, but also the interaction between attraction and comprehension. When humor, dramatic tension, or other attractive features were made to coincide with the heart of the educational message, this interaction could be used to enhance the effectiveness of the educational content. Yet, when the two did coincide, children would recall the attractive material and not the educational message (12).

In their summary chapter of the book *"G" is for growing: Thirty years of research on children and Sesame Street*, Fisch and Truglio point to "a consistent pattern of significant effects" (233) in academic areas, emergent literacy, school readiness, and social behaviors. "This was seen in the very first studies conducted in the early 1970s by Ball and Bogatz; who demonstrated that the children, who watched the most, learned the most. This was true regardless of age, viewing, geographic location, socioeconomic status, or gender" (James 10). Numerous subsequent studies have further demonstrated the positive impact of *Sesame Street* viewing on children's learning and school readiness (see Table 5).

Today, *Sesame Street* remains as popular and as relevant as ever. February 2002 brought the 33rd anniversary of *Sesame Street*'s first viewing. During that month, one of four new episodes written in response to the September 11th tragedy was aired, with Elmo learning about fires, firefighters, and post-trauma jitters. Below is the table of the research evidence on the impact of Sesame Street on Children by James M. Marshall.

Table 6: **The Research Evidence of the Impact of Sesame Street on Children**

Research Highlights of Thirty Years of Sesame Street	
Bogatz and Ball (1970) • Of the children who watched *Sesame Street*, those ages 3 to 5 learned the most; as their viewing increased, so did their gain scores on various early childhood assessments. • Topics that received greater screen time (i.e., letters) were more likely to be learned when compared with topics that received less screen time.	**Reiser, Williamson, and Suzuki (1984)** • Showed that cognitive learning increased when adults who watched *Sesame Street* with children asked them questions about letters and numbers and gave feedback. **Rice (1990); Rice and Sell (1990)** • Explored the use of four *Sesame Street* videocassettes in the natural home setting with

• Children who viewed the program at home gained as much as children who viewed the program in school under the supervision of a teacher. **Bogatz and Ball (1971)** • Teachers rated frequent viewers higher in the areas of general readiness for school, quantitative readiness, positive attitudes toward school, and relationships with peers. **Paulson (1974)** • Conducted earliest study on *Sesame Street* and its impact on pro-social learning, focusing on cooperation. • Found that *Sesame Street* viewers cooperated more than those who did not view the program.	20 children, ages 2 to 5, and their families. • Documented gains in vocabulary, letter recognition, number recognition, and word identification. • Interpreted the learning effects as "remarkable," considering that children averaged only 2.5 to 3 hours of viewing each tape over 11 weeks. **Zill (2001)** • Results from national survey found significant correlations between *Sesame Street* viewing and preschoolers' ability to recognize letters and tell connected stories when pretending to read. • Upon entering 1st and 2nd grade, children who viewed *Sesame Street* as preschoolers were more likely to read storybooks on their own and less likely to require remedial reading instruction.
Rice, Huston, Truglio, and Wright (1990) • Conducted two-year longitudinal study of 326 children and their families, which studied vocabulary acquisition among children 3 to 7 years old; they found that for children ages 3 to 3.5, *Sesame Street* viewing was a significant predictor of vocabulary scores achieved when reaching age 5. • Children's viewing of programs without specific educational intent, such as most cartoons, was not associated with increased vocabulary. • Most viewing was without parents, suggesting that children could learn vocabulary even when not accompanied by parents. • Associations of increased vocabulary held regardless of parent education, family size, child gender, or parental attitudes toward television.	**Wright, Huston, and Kotler (2001)** • Three-year longitudinal study found that viewing *Sesame Street* was positively associated with subsequent performance in reading, mathematics, vocabulary, and school readiness. • Findings held true even when the effects of socioeconomic status, mothers' education, and educational quality of home environment were statistically controlled. **Huston, Anderson, Wright, Linebarger and Schmitt (2001)** • Researchers conducted a "re-contact" study — a sample of high school students whose preschool television viewing had been tracked 10 to 15 years ago in earlier studies. • Adolescents who viewed *Sesame St re e t* often at age 5 had significantly better grades in English, science, and mathematics; read more books for pleasure; and had higher motivation to achieve.

Excerpts from, James M. Marshall *Learning with Technology: Evidence that technology can and does, support learning* (2002:11)

Schoolhouse Rock, was originally aired from 1973 to 1985, Schoolhouse Rock combined animation and catchy musical lyrics in a series of three-minute educational television cartoons to teach viewers lessons in history, grammar, multiplication, science, government, and finance (James 13). *Schoolhouse Rock* was the result of advertising executive David McCall's desire to help his 11-year-old learn his multiplication tables. To McCall, the solution seemed obvious: Why not use pop music to help kids learn? Hence, *Schoolhouse Rock* was born.

Unlike *Sesame Street*, little academic research exists regarding the impact of *Schoolhouse Rock* on learning among children. One of the few studies to assess its value looked at the ability of 4- to 11-year-olds to distinguish among television programming genres and comprehend the information presented. In that study, "Blosser and Roberts found that *Schoolhouse Rock* ranked as one of the two best-understood messages. Most of the evidence of its efficacy is anecdotal" (cited in James 13). Even though it has been 20 years since its first telecast, Engstrom notes how the mere mention of *Schoolhouse Rock* often leads original viewers to sing various songs and describe images from Rock segments (cited in James 13).

It is notable that although the programme was based on a hunch that music enhances learning, several studies provide evidence demonstrating the effectiveness of music as an attention getter and mnemonic device (see table). *Schoolhouse Rock* songs such as "Conjunction Junction," "What's Your Function" and "We the People" extensively use repetitive melodies and lyrics repeated in short and easy-to-remember phrases. When words are accompanied by a melody; the music adds form to the words, creating a pseudo-mnemonic device that scaffolds the content and prompts its place in long term memory.

*Mister Rogers' Neighborhood: A*fter 33 years, *Mister Rogers' Neighborhood* was PBS' longest running series when it stopped producing new episodes in 2001. The program targeted

2- to 6-year-old children and focused on developing learning readiness, which encompassed creating a sense of self-worth, a sense of trust, curiosity, a capacity to look and listen carefully, a capacity to play, and times of solitude. "Research conducted by Coates, Pusser, and Goodman shows that the program was generally successful in achieving these goals" (cited in James 13).

*The Electric Company, a*ired on PBS for five seasons during the 1970s, *The Electric Company* used musical and comedy sketches, cartoons, and demonstrations to teach its audience (James 13). The program was initiated as an experiment in using video to teach decoding skills for print medium and targeted children in early elementary grades who needed remediation in reading. The program focused on blending consonants, chunking letter groups, and scanning for patterns. Research conducted by Stroman showed that African- American children improved learning after viewing these programmes (cited in James 13). Graves' work demonstrated that learning increased and reading improved when children viewed these programmes with an adult, pointing to the important role that adults and teachers play in learning (cited in James 13).

Table 7: **Research Evidence on Learning with Music**

Some Studies Pointing to the Ability of Music to Enhance Memory
When letters of the alphabet were connected to musical pitch, recognition was enhanced among slow-learning children (Nicholson, 1972).
Several experiments have concluded that learning is enhanced when new information is presented in song (Chazin and Neuschatz, 1990; Gingold, 1985).
In a study, Wakshlag, Reitz, and Zillmann (1982) found that children liked music with a fast, marked tempo; clear, distinct rhythms; and repetitive melodies, leading the researchers to suggest that such music may invite learning and be more easily learned.

Excerpt from James M. Marshall *Learning with Technology: Evidence that technology can and does, support learning* (2002:13)

Educational Television and Video and the Needs of Special Populations

Television and Video use is an effective educational tool for all students, but its positive effect on special populations of students is gaining greater attention all the time. According to a survey by the Corporation for Public Broadcasting, these media are "highly valued as teaching tools and seen as especially effective for reaching visual learners and special populations" (CBP 12).

More than half of the teachers surveyed describe TV and video as "very effective" for teaching students with learning disabilities or economic disadvantages. Denning summarizes the benefits of video to a range of special student populations:

> Videos may help to promote learning in students with high visual orientation in their learning styles. Video can also provide visually-compelling access to information for many learners with learning difficulties who might miss learning opportunities provided solely by print-based materials. In this respect, videos provide important learning opportunities to students working in a second language. (2)

As Barron argues, not only can video create learning contexts that would not otherwise be accessible, "in some situations video is even superior to a field trip … because the video can be replayed and reviewed as often as necessary to ensure learning by students with learning disabilities or who are otherwise at-risk for poor school success" (3).

He explains further that there are numerous advantages for such "at-risk" students when instruction is supplemented by the use of video: First, video-based contexts provide rich sources of information with opportunities to notice sensory images, dynamic features, relevant issues, and inherent problems. Second, they give students the ability to perceive dynamic moving events and to more easily form rich mental models. This advantage is particularly important for lower achieving students and for students with low knowledge in the domain of interest. Third, video allows students to develop skills of pattern recognition which are related to visual and auditory cues rather than to events labeled by the teacher. In sum, video images

are ideal for creating a common experience for the teacher and learner that can be used for 'anchoring' new knowledge. (Barron)

For students learning English as a second language, like in the Nigerian situation, videos and films demonstrate communicative language within a language environment and cultural context (Wood, cited in Aiex 39). Video, especially film, provides a social context for English language learners; it can be played either with the sound on, so that students hear the language being spoken, or alternatively, with the sound off, so that learners can use their own language skills to provide the dialog or narrative.

2.3.4 Parallel Developments in 20th Century Educational; Drama/Theatre and Multimedia Involvement

One the most outstanding occurrences in education, particularly from the fifties onwards, has been the move towards a change in the role of the student, henceforward envisaged as agent of his/her own learning. Such a development has its theoretical underpinnings in the progressive movement, the constructivist model of learning and developmental psychology. In the British mise-en-scene, the climate of social change which followed the post-war years led to child-centred, 'progressive' methods of teaching and learning, mixed ability grouping and topic work (Valerie Halstead 384). The America Education Act of 1944 established the foundations for a more egalitarian school system, and paved the way for the introduction at the end of the fifties of Comprehensive Schools. Education is then viewed as the means for personal improvement and social transformation, and its primary aim is the whole development of individuals, who should be provided with meaningful experiences as a way to help them make sense of the world around. The traditional model involving the mere transmission of information is replaced by a more dynamic teaching practice in which children are exposed to active contexts and situations in order to help them acquire new skills and knowledge as well as explore their personal and social identity.

Drama, fitting as it does in the dynamics of an active pedagogy, makes its way into the educational syllabus, as reflected in the Newson Report of 1963:

> In short, drama along with poetry and other arts is not a frill ... It is through creative arts, including the arts of language, that young people can be helped to come to terms with themselves, more surely than by any other route (Newson, quoted in Pammenter 57).

Nowadays, drama is a significant force as gathered in the legal regulations, placed within English, a core subject, in the National Curriculum; in spite the fact that, classroom drama is not provided by all schools regularly (Toye and Prendiville 87).

Nevertheless, there is a tradition of curriculum drama or drama in education (DIE), which tallies with the "learning by doing" principle, and encompasses a wide range of devices and practices, according to the particular learning context, subjects involved and desired outcomes: from the preparation of particular plays to the use of simulation, theatrical games, improvisation and role-plays aimed at developing children's individual and social skills while fostering their creative and expressive capabilities. Students are thereby initiated into the fictional world and conventions of the dramatic art. Rejecting a merely instrumental conception of the dramatic medium, educational drama rests on the premise that the symbolic potential of theatre enables us to go beyond the surface of actions and situations in order to get a deeper understanding of things.

If we turn to theatre, the second half of the 20th century has witnessed the apparition of a wide number of popular, alternative movements leading to the creation of political, community, fringe and children's drama companies. Underlying such phenomena was the need to explore the manners in which theatre could be oriented to achieve social and educational goals. New forms are devised and topics of current interest for particular communities and groups of people introduced in order to produce performances adapted to the demands of a popular audience.

Moreover, experiments with traditional dramatic conventions that have resulted in a narrowing of the distance between actors and audience (in a literal as well as a metaphorical sense), and a blurring of the dividing line between the roles of performer and watcher, have been carried out by both mainstream and alternative companies. Thus, the fixed conception of the performing space has been challenged. No longer limited to a performance venue, the stage has become in principle infinitely adaptable, as pointed out by Russell Taylor (263), referring to instances such as the proposal of the German Bauhaus theorists to get drama out of theatres and perform in the streets or on balconies, the acting all round or in the middle of the audience practiced by the Moscow Realist Theatre or the case of Theatres-in-the-round, in which the public sits round the central acting area, adopted by amateur groups and some professional companies.

Furthermore, the deconstruction of the classical divide between actors and audience has gone beyond the category of space to that of function. In a variety of theatre performances, spectators have been engaged in the dramatic action, either brought into the plot or invited to improvise, with (alternately or inclusively) didactic, political, therapeutic or artistic purposes. An instance of this can be found in the various forms of popular theatre which evolved in Latin America, some of them initially set up as literacy campaigns, engaged in the production of performances addressing the problems of particular groups of people. Examples of this type of community theatre are the early Mexican Carpa, the sixties' Teatro Chicano, and, above all, Augusto BoaI's Forum Theatre.

The theories and work of Brazilian theatre practitioner Augusto Boal have played an important role in the democratization of theatre. Boal’s Theatre of the Oppressed (“rehearsal for reality” in his own terms) heralded the integration of the audience in the drama performance. His methodology engages the participants in direct control of the action, thus ceasing to be mere spectators to become spect-actors actively implicated in the dramatic production. Influenced by Paulo Freire's pedagogy of the oppressed, Boal initially employed

the techniques of theatre in the service of deprived communities. He worked with groups of peasants and workers, projecting into the fictional world of drama their problems and experiences in order to raise awareness of their own realities and elicit active responses to particular circumstances. Boal's methodology has been applied to educational theatre and inspired many developments in this field.

The prominent role given to drama in education, together with the exploration of the educational possibilities of the dramatic art as well as the questioning of its role in society, established the basis for the apparition in the fifties of the DIE phenomenon, an alternative dramatic movement born at the juncture of theatre and education practitioners and authorities. Thus, the rise of progressive and liberal education throughout the twentieth century has engendered the growth of explicitly educational uses of drama. From the turn of the twentieth century, educators in Britain and America started to look for and find in drama a pedagogy to accomplish the liberal progressive education which was attempting to centre the curriculum on the personal and social development of the child: "giving children a rudimentary dramatic training in the belief that such a training has a benefit of its own" (Bolton 18). In the years following the first World War this developed in the USA into 'Creative Dramatics' and in the UK into the 'Drama in Education' movement, both based on the active learning power of doing drama rather than reception as an audience, and both espousing improvisational methods - albeit quite different ones - to permit children to take part in drama not only as actors, but as playwrights and directors.

Multimedia Integration into Education: Two major developments are responsible for the integration of multimedia in education in the mid Twentieth Century: the change in the role of students in their learning and the new theories in education, i.e. constructivism Gardner's Theory of Multiple Intelligence. Over the 20th century, J. Dewey anticipates the constructivists and movement for progressive education and reflects on the question of a workshop type of

learning as a normal way of learning. The pupils are included in giving due consideration to meaning in such a way that they themselves apply the knowledge acquired. The techniques of learning which the pupils each use by themselves are the key to acquired experience in learning.

Therefore, effective uses of contemporary teaching theories are based on studying the problem of pupil learning as well as the structure and use of media and multimedia which accelerates learning. Piaget's research is corroborated by numerous levels of thinking which the pupils develop through construction processes or creation of subjective mental structures and external realities. The class environment should be stimulated by the research work of students and the development of a critical spirit. The contribution of Vygotsky who considers that pupils require a rich social environment which stimulates higher levels of cognitive functions is also significant (Norton and Wiburg 32).

For constructivism it could be said that it is an educational philosophy which states that there is not only one single reality; there are many realities which are experienced individually. The intellect is a primary source of knowledge and reality is built on its foundations. Such an educational philosophy also has its attitude in relation to multimedia: “Constructivists state: Let's enjoy ourselves today and be informed through the images of the media which are the reality of another order and no longer from personal experience or the experience of our nearest” (Norton and Wiburg 33). We are no longer interested in the background to the events whose truth, in fact, would relate to those events. “If for a moment we perhaps thought that the media is a mirror of society, today it is clear: television is a social apparatus and society has become the reflection of that apparatus” (Norton and Wiburg 31).

Constructivism is a theory which has developed in several directions. Individual constructivism advocates the idea that the pupil builds knowledge on the basis of his experiences, the results of learning come from personal interpretation of knowledge, and

learning is an active process which is developed on the basis of experience. Social constructivism describes learning as collaborative, where the meanings of different perspectives are mutually exchanged. Contextualization propagates situational learning where the thinking is the real-life context wherein it is applied. Real-life situations which are familiar and normal for the pupils are shown, i.e. authentic learning (all constructivists do not include contextualization as part of their philosophy). Radical constructivism emphasizes that every pupil is unique and the teacher does not know what the pupil needs or wishes to learn. Thus, they do not advocate aims, prepare completed subject matter in advance, and help in learning or any other restriction. While, Moderate constructivism emphasizes that personal construction of knowledge is not immediately responsible for development of the pupil's environment and that leaving all information of teaching to pupils is an unrealistic burden in the important task of mastering the aims of the curriculum.

Multimedia is an ideal device for presenting reality to the pupils. In many media combinations, the pupils are provided with possibilities of individually experiencing the presented reality. A multimedia stimulating environment in which the pupils find themselves encourages the pupil’s individual experience of the world and freedom of choice of the media by which he/she most effectively learns. For example: if the teaching aim is acquisition of new knowledge about a butterfly, then the teacher will create external motivation for learning and give the pupils opportunity to: praise, describe, draw, study from an encyclopedia or multimedia learning tool, count all the parts of the butterfly, compare it to other animals, imitate its movements, collect stamps with butterflies on them, go into the school yard and try to spot a butterfly; they do not have to do all these activities but choose which one to do.

Thus, the significance of multimedia stimulation and semantically rich transfer of information is in providing possibilities for self-actualization i.e. affirmation of all the pupils’ needs in class by which they acquire new knowledge, develop skills, habits and form their own

opinions. The meaning of constructivism is to assure multiple representation of reality is that reality is a construction in an individual's brain. Each brain develops its own reality. This is why we talk about individual realities and possibilities of multiple experiences of the given reality. Observation and description of "reality" is determined by the pupils, who create unique, authentic class activities. It is more important to ask the pupils for their own opinions than to traditionally demand a mechanic reproduction of the subject matter.

Therefore, by recognizing intellectual composition, learning styles and dominant profiles of each pupil in the class, the teacher will have basic guidelines of choice and use of multimedia by which he will satisfy the needs of pupils in learning. Multimedia teaching and learning provides the pupils with the possibility of success as it creates a synthetic experience in pupils, meaning that it enables simultaneous experience of the curricula through audio and visual senses. By encouraging the audio and visual senses in teaching and learning, clearer and richer impressions are created compared to stimulating each pupil individually. Sensory integration impacts on heightening the pupils' capacities. By sensory integration, the following abilities are developed, e.g. organization of use sensation, self-organization with which they fully experience the outer world. By doing this, conditions for greater success in learning are provided.

2.3.5 Planning Educational Television/Educational Video for Classroom Learning

Successful and productive school use of television and video has increased dramatically over the last decades. As the media continues to grow both more sophisticated and more user-friendly, teachers continue to become more adept at integrating these media into their instruction. Over a period of 20 years, the (Corporation for Public Broadcasting) conducted surveys of classroom uses of television and video that reveal increased use of and satisfaction with video in the classroom. "In the most recent survey, 92% of teachers said that using TV

and video helped them teach more effectively, and 88% said that "it enabled them to be more creative in the classroom" (CPB 34).

As with all educational technologies, the value of video relies on how it is implemented in the classroom. Reviews and meta-analysis of the research indicates that positive learning and affective outcomes are greatly enhanced and extended when the video is integrated into the rest of the lesson (CPB 36). Effectively integrating video into classroom instruction involves preparation and activities before, during and after viewing (Reeves 21). In other words planning ETV and Educational Video for the classroom take into cognizance the following process.

Purpose and Expectations for Viewing: Teachers can prepare for using video by previewing the content, establishing clear purposes for viewing and deciding what selections will best support that purpose. The value of video "is highly correlated to its integration within the curriculum in other words, how closely the content fits into the overall instructional sequence" (CPB 11). For instance, video may be used at the beginning of a unit to pique interest, during a unit or lesson to bring demonstrations into the classroom that might not otherwise be possible, or as a means of reviewing or reinforcing content.

Supporting students to engage with video as active learners requires creating the right setting for such learning to occur. While this may seem an obvious truism, a six year study of mass media usage in two Massachusetts school districts reveals that film and video are still often used for non-optimal purposes, including filling time, keeping students quiet, as a break from learning or as a reward for good behavior (Hobbs 36).

Using video as "edutainment" in this way reinforces "the passive viewing and unquestioning acceptance of received material that accompanies growing up in a video environment" (Denning 2). Setting expectations for students and providing a context for the

activity, beneficial with any learning tasks, may be especially crucial for viewing of video with content that is highly emotionally-charged. Denning fears that without proper instructional context and guidance, "video, like television, may condition viewers to be insensitive or to feel helpless in the context of events being watched" (1).

Selecting Video Content: Selecting effective video is an essential component of integrating this medium into practice and realizing the promise of multimedia in the classroom. In reviewing the historical, political and economic contexts of each major classroom technology over the past century; Fabos concludes that one of the most significant factors in the success or failure of an educational media is the quality of the content, rather than the medium itself (16). Selecting video that has strong, visually-rich educational content is a critical element for maximizing the effectiveness of video.

Video is a visual medium, and optimal use capitalizes on the strengths of its visual material. This includes providing visual demonstrations or evidence, dramatizing events and concepts, and appealing to the emotions. Educational video with instructional strategies and cognitive modeling traits embedded in the video itself can aid in student comprehension. Examples range from zooming in on details, to providing titles and other attention-drawing graphics, to animations. Videos with closed captioning can further promote learners' reading fluency and motivation to read (Lin 23).

Denning offers the following suggestions of positives to look for when evaluating videos:

I. Variation in the presentation
II. Humor
III. Age-appropriate narration and developmentally-appropriate thinking skills
IV. Chunking or organization in sections
V. Provision of meaningful examples
VI. Posing of open-ended questions

VII. Opportunities for students to carry out individual thinking

VIII. Opportunities for extension

IX. Teacher guides outlining possibilities for previewing or extension activities. (13)

Video becomes less effective if the selections shown depend too closely on non-visual elements of video and thus exploit the weaknesses of the medium by presenting abstract and non-visual information, relying too much on a "talking heads" style of conveying information or presenting intellectual arguments not backed up with physical evidence (Hampe 15). Since video conveys information that is both auditory and visual, these two modes must work in concert for video to be most effective. Overly-dramatic sound tracks, visuals and narration that is not supportive of one another and excessive use of still frames or slides can all detract from the educational message.

Benefits of Multimedia Drama Activities Videos in the Primary School Curriculum

One of the most important uses Educational Drama Activities Videos is that it makes it easy for instructors to incorporate multimedia into their teaching. While we use all of our senses to take in information, we each seem to have preferences in how we learn best. In order to help all students learn, we need to teach to as many of these preferences as possible.

There are a number of different models of learning styles as mentioned earlier. One of the most popular identifies visual, auditory, and kinesthetic as the three ways in which people take in information. We know from experience and research that student's respond well to the use of images to stimulate their interest in a subject. For about 65% of the population, this is their preferred style. Photographs, maps, paintings, graphs/charts, drawings are just a few of the types of visuals that can be used to engage students who are more visual learners. About 30% of the population prefers to receive information in an auditory manner. Some ways that you can incorporate sounds into your class include readings (poets reading their own works,

you reading important passages from a book, etc.), music, specific sounds (bird calls, ocean waves, etc.), and language tapes in foreign language classes. Finally the 5% of the population that prefers a kinesthetic approach would enjoy "doing" things as a way to learn information. This could include participating in the actions, demonstrations, and various kinds of simulations.

When we think about a typical primary school curriculum, it is rare to find all three of these approaches to learning incorporated into a class. While it may seem impossible to do this, it can be done through thoughtful planning and preparation. It does force us to conceptualize the class differently with a focus on the variety of ways in which students learn. See the example below.

Table 8: Planning Multimedia into the Primary Schools Curriculum

Class Topic	**Visual**	**Auditory**	**Kinesthetics**
The English Alphabets	Projects paintings / Pictures of English Alphabets in different Characters or Font; Capital Letters and Small Letters respectively in different colours	Reading aloud; of the Alphabets in different Characters or Font; Capital Letters and Small Letters	Role play of Teacher or Animation with Pupils Reading aloud; Alphabets in different Characters or Font; Capital Letters and Small Letters
Numbers and Counting	Projects paintings / Pictures of Numbers and in Roman figures in different colours	Reading aloud; the of Numbers and in Roman figures in different colours	Role play of Teacher or Animation with Pupils Reading aloud; Numbers and in Roman figures in different colours
Mathematics Symbols	Projects paintings / Pictures of the various Mathematics Symbols: Multiplication, Additions, Subtractions, Divisions etc in different colours	Reading aloud; the various Mathematics Symbols: Multiplication, Additions, Subtractions, Divisions etc	Role play of Teacher or Animation with Pupils Reading aloud; the various Mathematics Symbols: Multiplication, Additions, Subtractions, Divisions etc
States and Capitals	Projects paintings / Pictures / Maps of the thirty six States and Capitals and the FCT	Reading aloud; the thirty six States and Capitals and the FCT in different colours	Role play of Teacher or Animation with Pupils Reading aloud; the thirty six States and Capitals

	in different colours		and the FCT in different colours
Shapes in Mathematics	Projects paintings / Pictures of various Mathematics Shapes – Triangle, Square, Oval, Rectangle, Circle etc.	Reading aloud; the various Mathematics Shapes – Triangle, Square, Oval, Rectangle, Circle etc.	Role play of Teacher or Animation with Pupils Reading aloud / Demonstrating; the various Mathematics Shapes – Triangle, Square, Oval, Rectangle, Circle etc.
Colours	Projects paintings / Pictures of various Colours	Reading aloud; of various Colours	Role play of Teacher or Animation with Pupils Reading aloud / Demonstrating; of various Colours

2.3.6 Empowering and Inhibiting Elements of Learning in Multimedia Usage in Teaching

Empowering and inhibiting elements are important in the studies of multimedia usage in teaching: they influence the quality of learning. If the didactic criteria of multimedia evaluation are respected, they become empowering elements of learning. The advantages of multimedia learning are based on interdisciplinary knowledge. The didactic-methodical advantages provide for a higher level of interest and dynamics of learning, duration of knowledge as well developmental didactic-methodical competencies of the teacher.

Psychological advantages occur through providing a more effective motivation of the pupil through stimulating audiovisual sensory channels. Multimedia display of information is more deeply etched in the mind of the pupil. Pedagogical advantages are based on new forms of training the pupil for life-long education through various forms of individual and individualized learning. Gnostic advantages are manifested in various aspects of providing information, when compared to those which are mediated through only one sensory channel. Social advantages are manifested through easier furnishing of and accessibility to new information to a large number of people.

On the other hand, non-respect of didactic criteria elements of multimedia evaluation becomes elements that inhibit learning. In the teaching practice, there is the possibility of discovering the negative side of applying multimedia in class. This happens in the event of insufficiently developed didactic-professional competencies of the teacher as a result of deficiency of knowledge. In other words, ignorance or non-respect of didactic criteria of multimedia choice in teaching can trigger the opposite desired effect – ineffective teaching. Pinnington identify the basic elements that cause stress and inhibit the success of the pupil in learning as thus: "the educational system, competition, multimedia (television, computer and video games), developmental elements, electrical elements, diet and medical elements" (147).

From the stated elements, those which relate to the didactic-methodical approach will be observed. A rigid educational system is composed of rudimentary remains of traditional teaching as consequences of lower consciousness of the structure which places it on levels of a mezzo-system to macro-system. So in practice there is a curriculum with too little music, painting and physical education. The vicious circle is closed by rigid teachers who blindly follow "directives from above". The solution to this problem is seen in a teacher who will consciously and through a contemporary professional approach remove the stated flaws and moreover transform them according to the pupils. Therefore, the lack of sensory stimulation, movement, creative games and communication, is stimulated by the teacher to the level of the pupils' needs. Multimedia also can be an inhibiting element in learning when they are not used in moderation, thus suppressing the pupils' need for movement, interactive communication, development of imagination, and most of all in displaying violence which evokes anxiety and stress in pupils. This is why; again, the role of the teacher is emphasized.

With regard to didactic criteria of choosing multimedia which are stated, elements of didactic criteria are geared towards: the pupil (age, intrinsic motivation, previous knowledge and experiences of the pupil, development of sensory-communicational competency, learning

styles, activeness of pupil), the teacher (personal and professional competencies e.g. viewpoints on significance and role of multimedia, teacher's skills in using multimedia, teacher's skills in using teaching strategies), multimedia (sensory-communication structure, form, qualitative and quantitative structure, technical abilities for presenting content) and teaching strategies (didactic communication, accordance with teaching aim, phases of learning, teaching contents, suitability of room for multimedia presentation, form of mediating by multimedia presentation, suitability of learning and evaluation of effectiveness of multimedia and teaching strategies). In the previous sections, these elements are described as empowering. Therefore, in this section several examples will be mentioned which describe what happens when didactic criteria are not respected in choosing multimedia, but perform as inhibiting elements.

If the multimedia is not suitable for the psychophysical development of the pupil, it does not fulfill basic didactic-methodical laws or laws of developmental psychology. Unsuitable multimedia can be "too easy" – so that pupils are bored or "too heavy" – so that pupils do not understand the multimedia information at all. If multimedia is not understandable to pupils, it should not be used for teaching purposes. Therefore, there is a necessary condition for using those multimedia which have suitable content i.e. information. Multimedia will not achieve its purpose if pupils do not have enough enthusiasm for participating in learning. Certain previous knowledge and experiences of the pupils can also inhibit pupils in learning. For example, low level of knowledge of the English language can inhibit a pupil in using an educational back-up. All pupils in the class are not equally competent in receiving and processing information. Because of different development of sensory-communicational competencies, pupils in class differently receive and process information. Because of this, they learn in individual ways and achieve various results. A great inhibitor in using multimedia can be the negative attitude of the teacher towards multimedia.

Auto-censorship can block the teacher since e.g. the teacher is not "stimulated" to make an effort in getting a new multimedia for usage in class, because of "small salaries", "there are no conditions" for that type of work in classroom or he/she is not sufficiently educated or fully aware of the significance of multimedia teaching and learning through multimedia teaching strategic activity. "The Canadian sociologist, Marschall McLuhan emphasized that every communicational resource (media or multimedia) impacts on the way of thinking, regardless of the content which is presented" (cited in Pinnington 22). The impact of media is powerful and deep precisely because as content, it is given another media. The content of a film is a novel, drama or opera; the effect of film form is not linked with its program content. Such a viewpoint supports the fact that attention should be focused on choice of communicational devices but in their different usage.

Sensory-communicational structure of multimedia triggers two different senses. Multimedia has no sense when their overloading of information can cause weaker impact of learning. A qualitative structure of information of multimedia can fail if multimedia are not semiotically clear or instead of aesthetic messages, they verge on kitsch.

> It is a particular problem also, needless to say, from a pedagogical aspect most of all, when children in experiencing film or television images come face to face with numerous obstacles which hinder understanding of the plot: tempo and the semantic level of titles, semantic level of spoken dialogue, structures of subject, condensed space and time, speed of change of scenes, tricks, identification of numerous characters, relationships among actors, movement of camera, non-linear editing etc.; children up to ten years old identify objects, action and faces on the screen and so through their own construction, the familiar images and scenes are linked by them into a whole unit and work, i.e. what is recognized is transformed into the familiar and understandable with those they find personally pleasing. This *illusion* of understanding, unknown in relation to children vis-à-vis works of literature, very often leads to children, more or less, *seeing* one thing and *understanding* something else: lack of understanding or misunderstanding of film or television program prevents them from experiencing. The consequences are twofold: in the aesthetic sense, the artistic function of the work is suppressed; in a pedagogical sense, the work has poor impact (eventually undesirable) on young viewers. (Pinnington 18-19)

The technical capabilities of multimedia presentation can fail just at the moment when the pupils have been prepared for viewing. (E.g. it happens that the LCD projector does not

present educational software from the computer on to the projection screen etc.). All complicated solutions of multimedia usage or their formation, which can be potentially dangerous for health or injury to pupil, should be avoided in class.

With regard to didactic communication, certain multimedia requires usage of certain methods and social forms of work. It is difficult to ask pupils to complete tasks of some education back-ups if there are five parts in the class work with 30 pupils, three computers and team work! Such a teaching strategy must be changed. The pedagogical-educational achievement impacts on choice of multimedia. On the other hand, multimedia is used because of the media appeal itself, which is not consistent with the aim or does not have one. Then we speak about techniques or its mechanical usage.

Insufficiently heated (insufficiently ventilated) space, non-airiness of the classroom, insufficient or inadequate lighting, size of room…..can also affect the working activity but also the health of the pupils and teacher. The person who mediates with multimedia presentation can, due to his/her clumsiness, draw attention of the pupils into an undesirable course. Lack of implementation of evaluation cannot give feedback information on which multimedia, when, with which pupils, which aim, to prepare in subsequent teaching strategies.

We can conclude that respecting elements of the didactic criteria enables correct usage of multimedia in teaching. The aim of multimedia usage is thus achieved: they impact on the developmental achievement and changes in the pupil. Non-respect for elements of didactic criteria creates inhibiting elements in which multimedia usage does not achieve the expected pedagogical-educational aims.

2.5 Summary of Literature Review

This chapter provided a review of the literature relevant to the conceptual framework, theoretical framework and empirical review. These were related to multimedia drama activities

integrated with Interactive Learning Model in the classroom. The conceptual framework defined the various terminologies that are related to multimedia usage in education and Drama-in-Education pedagogy. The section on theoretical framework reviewed literature related to the various theories that are relevant to learning through multimedia; learning through drama and learning through the various learning theories in education. Literature on empirical review appraised extant literatures that espouse the use of multimedia and drama/drama activities as teaching tools and modes of teaching independently.

CHAPTER THREE

PRESENTATION OF DATA / DESCRIPTION OF MULTIMEDIA DRAMA ACTIVITIES WORKSHOPS PROGRAMMES IMPLEMENTED IN SCHOOLS

3.1 Background Preparation and Instruments' Descriptions

To ensure a wholesome and systematic presentation and analysis of data, the different means of data collection and analysis must be lucidly presented and explained. This chapter detailed the Educational Drama Activities Video and Television Intervention Programme for Classroom Environment employed in this study. These are complemented with the experiences from the various Primary Schools used. Below are the instruments and processes through which the researcher collected the data:

A. Instrument Validation Form: The Instrument Validation Form was designed to ascertain the reliability of the Instructional Materials used for this study. The Instructional Materials were examined and certified by three (3) experts: A professor of Educational Planning, Institute of Education, University of Benin, Benin City; A professor of Theatre Arts and Music of the Department of Theatre and Mass Communication, University of Benin, Benin City and a Senior Lecturer (with specialization in Media and Animation of the Department of Theatre and Media Arts, Federal University, Oye-Ekiti, Ekiti State Nigeria.

B. Consent Form or Approval Letters: Since this study involved research with human subjects and was conducted with the approval of three (3) Primary Schools across three (3) States in Nigeria, the researcher went through the application process with the Schools namely: SS Peter and Paul's Nursery and Primary School, Oye Ekiti, Ekiti State; St Peter's Demonstration Primary School, Akure, Ondo State; UNIBEN Consultancy Nursery and Primary School Benin City, Edo State. The Consent form or Approval Letter served as an official document through which the research work could be officially transacted.

C. The Pre- and Post-Test: This test was administered to participants (the experimental groups and control groups) to determine whether both groups were at par in terms of intelligence and knowledge, especially in English Language and Arithmetic. The same pre-test earlier administered prior to the data collection process was used for the Post-Test after the six (6) to eight (8) weeks of the application of the "**Drama Activities Educational Video and Television Intervention Programme for Classroom Environment"** to both the experimental groups and control groups. This was to determine if there were any significant changes in the learning outcome on the experimental groups. The same test was used because it is believed that the effect of the pre-test must have been neutralized on the participants after the eight (8-10) weeks intervals. The questions in the test were joggled from their positions in the pre-test, which made it a little different from what the participants had pre-knowledge of.

D. Questionnaire for Teachers: Teachers' Perception on "Drama Activities Educational Video and Television Intervention Programme for Classroom Environment" questionnaire was administered to the Class Teachers of the classes used. This questionnaire for teachers' was administered after students experienced the learning process with **Drama Activities Educational Video**. The Teachers' Questionnaire consisted of 5-point Likert Scale styled responses to 20 survey items administered to the experimental groups' teachers. This was used to identify the change of student attitude by measuring the level of agree response with each survey item. The analyses of teachers' perceptions are arranged in six categories: learner-centred environment; use of multimedia; understanding of content; motivation; content organization; availability of feedback.

E. The Instructional Materials: The instructional materials for this study were *Love Kids English Teaching*, *Nice Kids English Teaching* and *Children Mathematics Learning Collections* by Francisca Dike and Eyakwaire Benson respectively. These Educational Drama Videos contained music/songs, mime, simulation, role-play, poems, graphics, and animation.

F. Interactive Learning Module: The Interactive Learning Module as used implies the interactive session that precede the fifteen (15) to twenty (20) minutes interactive session after which the pupils, the class, the experimental group have watched the "Drama Activities Educational Video". This interaction enabled the subject-teachers to clarify the concepts and ideas where necessary. Here the pupils interacted among themselves based on what they had learnt while the teacher played the role of facilitator, rather than an authoritative figure. It was at this point that the teacher rewound the video where and when necessary.

The interactive session, which had been planned to be part of the module, enhanced the participants in their learning process. Instead of hearing from the teacher all the time, they had heard and seen from a teacher/a pupil or an animation via the video. The interactions further made the lesson imprinted into their memories. Hence the "Drama Activities Educational Video" alone without the "Interactive Learning Module" included would be incomplete.

Clarification of the Teacher's Role

The teacher in this programme served as a facilitator. They endeavored to follow a learner-centred approach. In this approach, the facilitator invited the participants to be part of a meaningful learning environment in which both the facilitator and participants explored, reflected on and discovered subject matters. In order to create an atmosphere of spontaneity, the facilitator followed the transactional analysis mode of child-towards-child in order to achieve the learner-centred-environment desired in our school systems.

Clarification of the Pupils/Learners Role

The learners in this programme were the centre of attention through which all action revolved. The thrust of this teaching and learning approach is to evolve a learner-centred approach. Pupils watched the lessons on the gadgets (video player and television in the classroom) under the teachers' supervision and as well as took instructions from the teacher where and when necessary. Immediately after the show, the teacher asked probing questions that led to the

pupils' interactions. The teacher coordinated the interaction to maintain orderliness and ensure that every pupil aired their opinion on any issue based on the lessons under discussion.

3.2 The Workshops Strategy/Description of the Programme

The "**Drama Activities Educational Video and Television Intervention Programme for Classroom Environment"** followed the same strategy in the three schools used.

First Step: At this stage, the researcher visited each of the Primary Schools used in this study to seek the consent of the school management. The nature, scope and objectives of the research are explained clearly to the management. Furthermore, letters were written and approvals were granted with the Head Teachers stamping the letters.

Second Step: At this stage, the researcher familiarized himself with the Classroom teachers, the subject teachers and the participants. He also explained the project – its nature, scope and objectives to them. Note: A subject teacher is mentioned here because the schools used by this researcher make use of the "subject- teacher' system" – a system where a teacher is assigned to teach a subject across the classes, as practiced in the Secondary Schools. The "subject- teacher' system" is a modern practice in schools. Despite this, each class still retains a class teacher who coordinates the class affair. Thereafter the researcher carried out the study with the participants.

Third Step: At this stage, the **Drama Activities Educational Video and Television in the Classroom** was test-run by the researcher with the subject teachers and class teachers in attendance. The researcher used this opportunity to educate the teachers on the use of the gadgets and how to teach and instruct the pupils through the use of the instructional-aids. Thereafter, the researcher allowed the classroom teachers and the subject teachers to handle and manage the project under his supervision. Since, the project was carried out concurrently in the schools used, the researcher visited the schools at random to ensure that the project was going smoothly. Note: the subject- teachers were allowed to use the gadgets based on the

periods allotted them on the school time table. The topics for each subject had been edited into the video (see Table 9). Each topic was viewed without interruption for fifteen (15) minutes and the subject teacher interacted with the pupils for twenty-five (25) minutes. The teacher could however rewind the video during the interactive session of the lecture, for the clarifications of some ideas or concepts. This interactive session or process is referred to as Interactive Learning Module (ILM) in this study. The Interactive Learning Module (ILM) highlighted the role and relevance of the project.

Worthy of note here is that, though the experimental groups in each school were ten (10) high-performing pupils, however, the **Drama Activities Educational Video and Television in the Classroom** project was experimented on the entire class of thirty (30) to forty (40) pupils as the case may be. This was to further investigate whether the **Drama Activities Educational Video and Television in the Classroom** could cater to a large class and at the same time to see how the project could fit into the school curriculum. Thus, at the end of the project, only the ten (10) participants who took the pre-test, had the post-test alongside the ten (10) participants who were also the best ten (10) from the control group class and had earlier taken the pre-test.

D. Fourth Step: at this stage, the researcher interacted with the participants – the experimental group alone – based on the following: learner-centred environment; use of multimedia; understanding of content; motivation; content organization to ascertained acceptability and the success or failure of the project. The researcher asked the pupils questions on:

1 The Drama Activities Video & TV (ILM) Classes were lively and gave room for interactions.
2 The Drama Activities Video & TV (ILM) Classes were a kind of learning through fun and the concepts were clearly articulated.
3 The Drama Activities Video & TV lectures seemed unenthusiastic about teaching the subject-matters.
4 You found the Drama Activities Video and TV lectures very stimulating compared to the

Chalk-&-Talk Method.

5 The Drama Activities Video & TV lectures were supportive of students and not insulting or intimidating.

6 The Drama Activities Video & TV lectures gave clear and helpful explanations of the concepts and subject matter.

7 The Drama Activities Video & TV lectures really cared about me as an individual pupil.

8 The use of media- Drama Activities Video & TV (ILM) is appropriate at the lower Primary School.

9 With Drama Activities Video & TV (ILM), pupil's actively participate in the learning process.

10 Information presented through the Drama Activities Video and TV module was clear and concise.

11 The lectures of the Drama Activities Video and TV Interactive Learning Module ILM were easy to understand.

12 The in-class activities of Drama Activities Video & TV lectures helped me to be active in the learning process.

13 Discussions with other pupils in the Drama Activities Video & TV lectures helped me learn more about the subject matter.

14 With Drama Activities Video & TV, when I had questions during class, I felt comfortable asking them.

15 With Drama Activities Video & TV, when I had questions or concerns outside of class, I felt comfortable talking to my teachers.

16 The Drama Activities Video & TV class created a sense of community and I felt like a part of the group.

17 The Drama Activities Video & TV classes were as boring as the traditional Chalk-&-Talk Method.

18 I learnt better in Drama Activities Video and TV classroom than in regular classroom.

19 It seems the Drama Activities Video & TV Class- Interactive Learning Module (ILM) format would be easy to get used to.

20 I would like the Drama Activities Video & TV learning to be a permanent teaching & learning method for my classes.

Thereafter, the post-test was administered to both participants – the experimental and control groups. The oral interactions with the experimental group and the teachers involved in this

study, the results of the post-test administered to both groups of participants and the result of the teachers' questionnaire administered in Step five formed the total data analyzed and discussed in Chapter Four.

E. Fifth Step: Here, the researcher interacted with the teachers involved in the study based on the following: learner-centred environment, use of multimedia, knowledge of content, motivation, content organization to ascertain acceptability and the success or failure of the project. Thereafter, the teachers' questionnaires was administered and retrieved immediately after completion.

3.3 Clarification of the Lesson Format

The lessons took place within a period of six (6) to seven (7) weeks, in each of the classes used. The lesson ran on daily basis through the five school days of the week and for forty-forty five (40-45) minutes per subject period during the school term. The lessons captured in the Drama Activities Educational Videos aree divided into four introductory lessons: English Language, Arithmetic, Current Affairs and Basic Science. These were further packed into twenty-seven (27) in the Drama Activities Educational Videos with the following drama activities – music, animation/puppets, simulation, mime, dance and role-play. Below is the lessons/topics table describing the different learning styles:

Table 9: **Clarification of the Lesson Format for the Programme**

S/N	Class Topic	Visual	Auditory	Kinesthetics	Dramatic Activities Present in the Learning Process
1.	**The English Alphabets**	Shows the paintings / Pictures of English Alphabets in different Characters or Font; i.e. Capital Letters and Small Letters respectively in different colours	Pupils Reading aloud; the Alphabets in different Characters or Font; Capital Letters and Small Letters	Role play of Teacher / Pupil or and Animation with Pupils Reading aloud; Alphabets in different Characters or Font; Capital Letters and Small Letters	Music, Animation / Puppets, Simulation, Mime, Dance, Role - Play
2.	**The English Alphabets**	Shows the pictures of each of the English	Pupils Reading aloud; each of the English	Role play of Teacher / Pupil or and Animation with Pupils	Music, Animation /

	and Words formation	Alphabets and the Objects, Animals or Things that they could form, i.e. A- for- Apple, B- for – Ball etc. with the picture of each Objects, Animals or Things inclusive	Alphabets and the Objects, Animals or Things that they could form, i.e. A- for- Apple, B- for – Ball etc. with the picture of each Objects, Animals or Things inclusive	Reading aloud and identifying the Alphabets and the Objects, Animals or Things that they could form, i.e. A- for- Apple, B- for – Ball etc. with the picture of each Objects, Animals or Things inclusive	Puppets, Simulation, Mime, Dance, Role - Play
3.	**Two Letters Words**	Shows the pictures of each of the English Alphabets and the process of Adding them to form words, i.e. A + S =AS; O + X = OX, etc.	Pupils Demonstrating the words formation process and Reading it aloud	Role play of Teacher / Pupil or and Animation with Pupils Demonstrating the words formation process and Reading it aloud	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
4.	**Three Letters Words**	Shows the pictures of each of the English Alphabets and the process of Adding them to form words, i.e. C + A + T =CAT; B + O + X = BOX, etc. The pictures of each Objects, Animals or Things are also shown.	Pupils Demonstrating the words formation process and Reading it aloud	Role play of Teacher / Pupil or and Animation with Pupils Demonstrating the words formation process and Reading it aloud	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
5.	**Four Letters Words**	Shows the pictures of each of the English Alphabets and the process of Adding them to form words, i.e. H + A + N + D = HAND; B + O + A + T = BOAT, etc. The pictures of each Objects, Animals or Things are also shown.	Pupils Demonstrating the words formation process and Reading it aloud	Role play of Teacher / Pupil or and Animation with Pupils Demonstrating the words formation process and Reading it aloud	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
6.	**Five Letters Words**	Shows the pictures of each of the English Alphabets and the process of Adding them to form words, i.e. E + A + R + T + H = EARTH; H+ E + A + R + T = HEART, etc. The pictures of each Objects, Animals or Things are also shown.	Pupils Demonstrating the words formation process and Reading it aloud	Role play of Teacher / Pupil or and Animation with Pupils Demonstrating the words formation process and Reading it aloud	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
7.	**Words and Opposite**	Shows the Words and their meaning i.e. Short, Old, Man etc. The Opposites of the Words and their meaning are also shown in pictures	Pupils Reading aloud; each words and their opposite	Role play of Teacher / Pupil or and Animation with Pupils Reading aloud; each words and their opposite	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
8.	**Singular and**	Shows the Words and	Pupils Reading	Role play of Teacher / Pupil or	Music,

	Plurals	their meaning in a tabular form. The process and the rationale for forming the Plurals are also shown, i.e. Man-Men, Boy – Boys, Lorry – Lorries	aloud; each words and their plurals	and Animation with Pupils Reading aloud; each words and their plurals	Animation/ Puppets, Simulation, Mime, Dance, Role - Play
9.	**Spellings Drill**	Shows the alphabets and words formation process	Pupils Reading aloud; each words formed	Role play of Teacher / Pupil or and Animation with Pupils Reading aloud; the spelling of each words formed and the process	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
10.	**Writing the Alphabets**	Shows the Process of writing each alphabets, i.e. showing the hand in the sketching process	Pupils Reading aloud; each alphabet formed	Role play of Teacher / Pupil or and Animation with Pupils Reading aloud; each of the words sketched and the process	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
11.	**Drawing Objectives**	Shows the Process of drawing / sketching, i.e. showing the hand in the drawing / sketching process	Pupils Reading aloud; each object or items sketched or drawn	Role play of Teacher / Pupil or and Animation with Pupils Reading aloud; each of the object / items sketched or drawn and the process	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
12.	**Counting Numbers/ Figures**	Shows the Process of sketching each number and their words equivalence, i.e. 1- ONE, 2 – TWO, 3- THREE etc.	Pupils Reading aloud; number and their words equivalence, i.e. 1- ONE, 2 – TWO, 3- THREE etc.	Role play of Teacher / Pupil or and Animation with Pupils Solve / Reading aloud; each number and their words equivalence, i.e. 1- ONE, 2 – TWO, 3- THREE etc.	Music, Animation/ Puppets, Simulation, Mime, Dance, Role-Play
13.	**Identify figures & their Roman Numerals**	Shows paintings / Pictures of Numbers and their Roman Figures equivalence, i.e. 1 – i; 3- iii; 5- V; 10- X, etc.	Pupils Reading aloud; Numbers and their Roman Figures equivalence, i.e. 1 – i; 3- iii; 5- V; 10- X, etc.	Role play of Teacher / Pupil or and Animation with Pupils Solve / Reading aloud; Numbers and their Roman Figures equivalence, i.e. 1 – i; 3- iii; 5- V; 10- X, etc.	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
14.	**Learning the Arithmetic Symbols**	Shows paintings / Pictures of the various Mathematics Symbols: ×-Multiplication, +- Additions, - Subtractions, ÷- Divisions, Equals = etc in different colours	Pupils Reading aloud; Pictures of the various Mathematics Symbols: ×- Multiplication, +- Additions, - Subtractions, ÷- Divisions, = -Equals etc.	Role play of Teacher / Pupil or and Animation with Pupils Solve / Reading aloud; Pictures of the various Mathematics Symbols: ×-Multiplication, +- Additions, - Subtractions, ÷- Divisions, Equals = etc.	Music, Animation/ Puppets, Simulation, Mime, Dance, Role-Play
15.	**Addition**	Shows the Pictures of Numbers Additions, outcomes and the process, i.e. 3 + 5 = 8; 5+ 6 = 11 etc.	Pupils Reading aloud; Numbers Additions, outcomes and the process, i.e. 3 + 5 = 8; 5+ 6 = 11 etc	Role play of Teacher / Pupil or and Animation with Pupils Solve / Reading aloud; Numbers Additions, outcomes and the process, i.e. 3 + 5 = 8; 5+ 6 = 11 etc	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
16.	**Multiplicatio n**	Shows the Pictures of Numbers Multiplication, outcomes and the	Pupils Reading aloud; Numbers Multiplication,	Role play of Teacher / Pupil or and Animation with Pupils Solve / Reading aloud; Numbers	Music, Animation/ Puppets, Simulation,

		process, i.e. 3 × 5 = 15; 5× 6 = 30 etc.	outcomes and the process, i.e. 3 × 5 = 15; 5× 6 = 30 etc	Multiplication, outcomes and the process, i.e. 3 × 5 = 15; 5× 6 = 30 etc	Mime, Dance, Role - Play
17.	**Division**	Shows the Pictures of Numbers, Division, outcomes and the process, i.e. 12 ÷ 4 = 3; 20 ÷ 4 = 5 etc.	Pupils Reading aloud; Numbers, Division, outcomes and the process, i.e. 12 ÷ 4 = 3; 20 ÷ 4 = 5 etc.	Role play of Teacher / Pupil or and Animation with Pupils Solve / Reading aloud; Numbers, Division, outcomes and the process, i.e. 12 ÷ 4 = 3; 20 ÷ 4 = 5 etc.	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
18.	**Subtracts (-)**	Shows the Pictures of Numbers Division, outcomes and the process, i.e. 12 - 4 = 8; 20 - 4 = 16 etc.	Pupils Reading aloud; Numbers Division, outcomes and the process, i.e. 12 - 4 = 8; 20 - 4 = 16 etc.	Role play of Teacher / Pupil or and Animation with Pupils Solve / Reading aloud; Numbers Division, outcomes and the process, i.e. 12 - 4 = 8; 20 - 4 = 16 etc.	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
19.	**Equals (=)**	Shows the Pictures of (=) Equals in solving Arithmetic problems.	Pupils Reading aloud; (=) Equals in the process solving Arithmetic problems.	Role play of Teacher / Pupil or and Animation with Pupils Solve / Reading aloud; (=) Equals in the process solving Arithmetic problems.	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
20.	**Tens and Unit**	Shows the Pictures of Tens and Unit (T U) and its usage in Arithmetic, i.e. T U in Tabular form.	Pupils Reading aloud; Tens and Unit (T U) and its usage in Arithmetic, i.e. T U in Tabular form.	Role play of Teacher / Pupil or and Animation with Pupils Solve / Reading aloud; Tens and Unit (T U) and its usage in Arithmetic, i.e. T U in Tabular form.	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
21.	**Hundreds, Tens and Unit**	Shows the Pictures of Tens and Unit (H T U) and its usage in Arithmetic, i.e. (H T U) in Tabular form.	Pupils Reading aloud; Tens and Unit- (H T U) and its usage in Arithmetic, i.e. (H T U) in Tabular form.	Role play of Teacher / Pupil or and Animation with Pupils Solve / Reading aloud; Tens and Unit (H T U) and its usage in Arithmetic, i.e. (H T U) in Tabular form.	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
22.	**Shapes**	Shows paintings / Pictures of various Mathematics Shapes – Triangle, Square, Oval, Rectangle, and Circle etc.	Pupils Reading aloud; Pictures of various Mathematics Shapes – Triangle, Square, Oval, Rectangle, Circle etc.	Role play of Teacher / Pupil or and Animation with Pupils Identifying / Reading aloud; Mathematics Shapes – Triangle, Square, Oval, Rectangle, Circle etc.	Music, Animation/ Puppets, Simulation, Mime, Dance, Role-Play
23.	**Colours**	Shows paintings / Pictures of various Colours	Pupils Reading aloud; the Pictures of various Colours	Role play of Teacher / Pupil or and Animation with Pupils Identifying / Reading aloud; the various Colours	Music, Animation/ Puppets, Simulation, Mime, Dance, Role – Play
24.	**The 36 States & Capitals & the FCT. in the Map**	Shows paintings / Pictures / Maps of the thirty six States and Capitals and the FCT in different colours	Pupils Reading aloud; the thirty six States and Capitals and the FCT.	Role play of Teacher / Pupil or and Animation with Pupils Identifying / Reading aloud; the thirty six States and Capitals and the FCT, showing the relationship, i.e. Boundaries between others States	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
25.	**The Parts of the Body.**	Shows paintings / Pictures of Human Body	Pupils Reading aloud; different parts of the	Role play of Teacher / Pupil or and Animation with Pupils	Music, Animation/ Puppets,

		and arrows identifying the separate parts	Human Body	Identifying the different parts of the Human Body	Simulation, Mime, Dance, Role - Play
26.	**Items found at Home**	Shows paintings / Pictures of different items found at home and their names	Pupils Reading aloud; of different items found at home	Role play of Teacher / Pupil or and Animation with Pupils Identifying the different items found at home	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play
27.	**Items found in the School**	Shows paintings / Pictures of different items found at School and their names	Pupils Reading aloud; of different items found at School	Role play of Teacher / Pupil or and Animation with Pupils Identifying the different items found at School	Music, Animation/ Puppets, Simulation, Mime, Dance, Role - Play

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter is concerned with the analysis and discussion of data gathered from the data collection locations. The schools were University of Benin Consultancy Nursery & Primary School, Benin City, Edo State; St Peter's Demonstration Primary School Akure, Ondo State and SS. Peter and Paul's Nursery and Primary Schools Oye- Ekiti, Ekiti State.

4.1 Teachers' Opinion on Usage of Drama Activities Educational Video Teaching Tools and Aids

The teachers' response indicated that there are observable advantages of using multimedia drama activities in the classroom teaching and learning process. Firstly, the respondents agreed that they found out that students were motivated when the lesson was integrated with multimedia. Since multimedia integrates some or all the five elements namely text, graphic, animation, audio and video in a lesson, its incorporation in the classroom will expose pupils to the new perspective of learning. This will increase the number of "want" to learn motivation and reduce the number of "need" to learn motivation simultaneously. This might be because some difficult concepts are better explained through the use of multimedia. Moreover, since each student has different level of learning ability, teachers' use of the traditional means of teaching may contribute to students' lack of motivation to learn as they have been exposed to similar approach all the time. Hence, the respondents stated that the problem can be mitigated by incorporating multimedia in classroom teaching.

Secondly, the entire teacher respondents opined that the integration of animation made their lessons more interactive and resultantly made their students understand the lessons better. Animation and graphics are visually appealing and when a student's attention is attracted to these displays, they are more likely to study them for longer periods of time. In addition, these

two elements make complex information easier to process and comprehend. It thus required less cognitive effort in order to understand the lesson instead of using text-based description only.

In addition, the entire teacher respondents agreed that students paid more attention when they used multimedia as compared to traditional method of chalk and talk. The traditional method is dull and boring compared to the use of multimedia. In traditional method, a teacher usually did the talking and explaining. The teacher controlled the instructional process and tended to emphasize factual knowledge. The students only listened, thus playing a very little part in the learning process. The advent of technology of multimedia has rapidly changed the scenario by providing a stimulating environment for learning and retaining the information delivered.

There was a unanimous agreement by the teachers that the students participated in the lesson actively when the teacher integrated multimedia element in classroom teaching. The lesson became more interesting and the students paid more attention. The students became active participants in the discussion by giving responses to the teacher's lesson. The respondents also stated that videos retained students' attention for a lengthier period compared to the traditional method. Interactive materials in teaching attracted students' attention successfully because when students watched a video, their curiosity level increased.

The teachers further reported that students did not hesitate to ask and answer the questions asked during lessons. Since the students had been made to learn through fun, their anxiety levels had reduced and were consequently more expressive. The teachers also indicated that the use of text only made the lessons boring and less interesting. This might be because texts required a lot of reading and not many students like to read. Hence, a teacher might find that the usage of text only did not help the lesson become lively. In sum, most of the respondents had very positive response to the incorporation of multimedia into the classroom environment.

4.2 Pupils' Opinion on Usage of Drama Activities Educational Video Teaching Tools and Aids

Parallel with questioning of teachers, the opinions of their pupils were engaged on the usage of teaching tools and aids in class. In a developmental sense, it is important to know the opinion of the pupils, as the teaching process is focused on them. Their point of view should be a basic regulator of choice of teaching tools and aids.

Pupils informed that Drama Activities/Educational Videos as teaching tools and aids in the classroom learning is a novel idea in their school. Although, they had consciously or unconsciously seen and watched these kinds of videos, its presence in the classroom environment with their teacher as a facilitator in their interaction process made a difference to them. They lauded the event.

As regards the incorporation of multimedia aids in the learning process, the pupils admitted that it made learning easy for them. The multimedia aided when the explanation was given first in details and in the process of interactions, the teacher asked them to explain and write what they had seen and heard. These make learning more detailed and explanatory than when the teacher did all the talking and the writing with the aid of text-books.

Secondly, with the dramatic activities – like music, animation/ puppets, simulation, mime, dance, role-play and improvisations – embedded in the videos, the pupils stated that the activities made learning fun to them. Fundamentally, young children like play; thus presenting learning to them through play is an added advantage. With these dramatic activities, the pupils were aided to develop keen interest in the teaching and learning process. It was observed that, during the interactive session, the pupils imitated the actions of the persons they had seen in the video. They also pronounced words as pronounced in the videos. They also held their pencil and biro to draw, sketch and write as the characters in the videos did.

The pupils reiterated their preference for the multimedia learning over the traditional chalk-and-talk method of teaching and learning. They admitted that Drama Activities Educational Videos and Interaction allowed them to express themselves, making them active

in the teaching and learning process rather than passivity which they had been expected of them in the chalk-and-talk method of teaching and learning.

It was also observed that the pupils were empowered with the use Drama Activities Educational Videos and Interactive Learning Module in the classroom. Pupils who were naturally introverted confirmed that in the Interactive process, they were encouraged to air their views just as their counterparts in the videos had done. Coupled with the teachers' disposition of being a facilitator of knowledge rather than an authoritative figure, the pupils' disposition also transformed from intimidated pupils to being highly responsive, expressive and vocal. They were no longer passive receptors of knowledge but active co-creators of knowledge.

With the Drama Activities Educational Videos and Interactive Learning Module, pupils' confidence was restored and they enjoyed learning. For instance the pupils admitted that their voices were heard and their opinion respected with the teaching aids in use as opposed to the traditional chalk-and-talk method of teaching and learning in which they were booed when they were unable to express themselves. The Interactive Learning Module granted learners' autonomy to a certain extent. The pupils were in charge; they kick-started the discussion and interaction after watching the videos. There was sufficient flow of information between the pupils and their teachers in the sense of reactions generated in the interaction process.

Drama Activities Educational Videos and Interactive Learning Module encouraged pragmatic teaching and learning process. The pupils described this teaching and learning process as being practical. In lessons on solving Arithmetic problems, every detail and process of arriving at the final answers were clearly presented to the pupils. In a similar vein, the pupils were also taught the processes of word formation using the appropriate sound of the English language. This was different from the reliance on text books and rote learning practiced in the traditional talk-and-chalk method of teaching. Interactive Learning Module focused attention

on the problem solving process rather than focusing on the solution which the pupils knew nothing about as obtained in the traditional talk-and-chalk method of teaching. With the traditional talk-and-chalk method of teaching, rote learning is encouraged and creativity discouraged.

The pupils suggested that Drama Activities Educational Videos and Interactive Learning Module fostered a learner-centred learning environment. The pupils learnt on their own and at their pace; the teachers had less pressure and no longer assumed the authoritative role which gave room to threaten and intimidate the learner. The teacher was a mere facilitator of knowledge, guiding the pupils in their interaction and correcting them where and when necessary. The teacher talked less. To recap or explain, all they had to do was to forward or rewind the video to the appropriate sessions and the pupils corrected themselves.

4.3 Discussion of Findings

The findings of this study have highlighted the advantages of integrating multimedia Drama Activities Educational Videos in the classroom teaching. Students were motivated to learn when Multimedia Drama Activities Educational Videos were incorporated in their lessons. In addition, through the integration of multimedia elements such as video, animation, graphic, text and audio, lessons became more interactive and appealing to the students. This indirectly attracted students' attention and aided their comprehension. Moreover, students were able to retain the information presented to them because multimedia will activate and stimulate the memory process. The students participated actively in the classroom as the multimedia activities reduced the anxiety level among them.

The findings also revealed that highly visual and interactive characteristics of multimedia helped to facilitate learning. Information can be presented in a variety of formats - text, picture, video, simulation. The use of multimedia stimulated critical thinking and problem solving in the children. They recognized that to solve a challenging problem they must first

learn and understand information before they can apply this information to solve the problems. This process improves learning by making information meaningful and applicable. Two benefits arise with critical thinking exercises:

I. Students gain critical thinking skills helpful in solving other problems, and

II. The subject matter is personalized, thus facilitating retention.

Students move through several stages in this learning process. First, students gain a knowledge foundation necessary for critical thinking and problem solving. Stage two involves the use and application of this new information through problem solving. Problem solving activities are designed to stimulate the formulation of new questions whose answers form the foundation for new insights and new knowledge. This learning process may be applied to new questions that are posed within the course design and can lead students to reflect and use what they have learned. This creates a sense that learning is important and has meaning. Sustained exposure to multimedia teaching and learning will definitely ensure that the spirit of enquiry and willingness to create things are inculcated in our pupils right from an early age.

Implications of Drama Activities Educational Video for Learning

Significant changes in the teacher-student relationship resulted from this reorientation to the teaching and learning process. Our expectations of students also changed dramatically. Classes that once were standard "lecture-text-test" formats were transformed into critical thinking and skills development learning experiences. The instructor and students formed a partnership in this new format. The instructor was the guide or "intellectual body- guard" responsible for leading students to a variety of information. Students were given the responsibility to learn from these sources. Much of this learning took place inside the classroom through multimedia learning.

Learning took place on an individual or collaborative basis depending on individual learning modes. The classroom became the platform for critical thinking, class discussions, and collaborative working sessions. Class time was devoted to stimulating ideas and synthesizing information through active participation by the students. Communication skills, writing skills, and general research or thinking skills were soon developed by students. With the Drama Activities Educational Video, curriculum planners would continue to redesign subjects to meet the continually changing learning needs and interests of students.

4.4 Advantages and Disadvantages of Multimedia Drama Activities in Education

The teachers' responses to question on the advantages and disadvantages of multimedia teaching are systematically presented and discussed here. Responses on the advantages of multimedia are first presented followed by their disadvantages. Since the questions were open type, the original responses of the teacher are stated.

The advantages of multimedia usage in the teachers' opinion are as follows:

1. Better, more successful and interesting class.
2. Lucidity, greater motivation for work, sometimes better results in learning.
3. Economical quality, lucidity, systematization, stronger experience (stimulation).
4. Dynamism of class, interesting features, systematization, lucidity.
5. Drawing closer to children's interests, following contemporary technology, modernization of educational system.
6. During multimedia usage children are more active, they research themselves.
7. The pupil has the possibility himself of determining and choosing the tempo of learning as well as teaching content which he wants and can master.
8. Quicker and easier connection and mastering of teaching contents by pupils.
9. Lucidity in teaching encourages activity, additional motivation.
10. To enrich the child's experiences, sensory and cognitive development.
11. A more intense evocation and easier execution of theme, more entertaining atmosphere.
12. Develops oral skills, ability to produce and develop rhythm with pupil.
13. It is more interesting for the pupils and they do not have to look constantly at the teacher.
14. Concretization.

15. Children have opportunity to learn in harmony with the times in which they live and in which they will live.
16. Promotes manner of demonstration and learning.
17. Dynamism and interesting features of class as revealed in actively engaged pupils.
18. Widens new knowledge and adds to existing.
19. Curriculum is better carried out.
20. More interesting teaching, pupils remember better teaching contents and apply what is learned in practice.
21. Activities are more dynamic; everything is more pictorially displayed and through multimedia, the curriculum is shown in a more interesting way.
22. Activeness of all pupils during the lesson.
23. More effective mastering of teaching contents, teaching in line with learning style of pupil.
24. Children more easily master subject matter and remember it longer.
25. Better access to information, intercultural cooperation.
26. To offer opportunity to pupils who do not have possibility of using multimedia at home to keep abreast of developments in the world.
27. We teach pupils that the teacher is not the only source of knowledge; we teach them how to find and access information.
28. Simpler and more pleasant way of reaching goals.
29. Economic quality of teaching; different sources and stimulations have a positive effect on perceptions of pupils' abilities.
30. Those areas which children find difficult are more accessible.
31. Greater experience-linked values for pupils.
32. Able to explain teaching contents in several ways and with several sources.

The advantages of multimedia usage in teaching focused on the responses which relate to class and pupils. Answers which relate to class are manifested in its characteristics: it is more interesting, higher quality, lucid, dynamic, systematic, modern as contemporary teaching strategies are used, concrete and economic. Multimedia offers the possibility of using several different methods. The teaching contents can be executed more qualitatively as well as pedagogical-educational achievements. The vividness of multimedia creates external motivation. From time to time multimedia takes over the role of teacher in leading pupils.

Difficult-to-access reality is made easier. Multimedia teaching triggers external motivation, a creative atmosphere and a positive environment.

Responses which relate to pupils showed that pupils were actively engaged in the process of learning and researching. They learnt faster and more easily; and knowledge was more lasting. The pupils also developed abilities and skills. Multimedia stimulated the independence of the pupil. It encouraged pupils to strengthen their potential for information usage. A multimedia approach impacts on the audio-visual senses of the pupils and experiences are enriched. It impacts in a more diversified manner on developmental changes, aiming towards individual perceptive potential of pupils, the time-frame of acquiring information and towards their learning styles. In this way, pupils actively participate in the learning process. The teachers stated that quality of multimedia is also an advantage that impacts on the modernization of the teaching process.

In the analysis of the teachers' responses, two categories for classification were observed. Multimedia had advantages for pupils' achievement in learning and usage in class. The teachers responded positively on the advantages of multimedia in the process of learning with their pupils. Therefore, through their answers, the teachers confirmed the hypothesis that the advantages of multimedia are recognized through the impact on the level of knowledge and motivation of pupils, but also stated other advantages which relate to the pupil: activeness in class, independence, ease and speed of learning, development of various competencies of pupils, respect for pupils' learning styles as well as long-term memory of that learned.

The teacher's responses on the advantages of multimedia in the teaching and learning process impacted a correlation between multimedia and other elements of the didactic-methodical field. It proved that there is a relationship between multimedia and other elements of the didactic-methodical field. Through multimedia usage the following is encouraged: usage of principles of systematization and lucidity, more successful mastery of teaching contents, methods of demonstration and more successful achievement of the teaching aims. The

meaning of multimedia as a teaching tool is in its interesting form of software as well as depersonalizing the role of the teacher. When compared to the strategy of teaching, multimedia impacts on teaching at several levels. Multimedia also affects the creation of a positive class atmosphere.

The Disadvantages of Multimedia in Education

Issues on the disadvantages of multimedia usage in teaching depended on the competencies of the teacher. This hinged on role of the teacher in devising and executing teaching strategies under conditions in which they work. A competent teacher has the power to educate pupils for proper usage of multimedia, stimulate various social forms of work, choose suitable multimedia contents compatible with the curriculum, regulate the time of multimedia usage, exchange multimedia with other teaching tools and aids etc. The teacher is expected to educate pupils in using multimedia and learn along with them.

The first disadvantage identified by teachers is social isolation. This stems from a wrong choice of multimedia, one which is not suitable for the age of the pupils. A competent teacher will not allow "bad" multimedia which is not suitable for the pupils' age to be used in class. The teachers further asserted that along with multimedia the teacher is important, his/her word, look, smile, movement, way of holding the class, does not distance the pupil from the teacher, neither does it lessen his/her values or communication. The teacher then occupies a different position of his/her activity in the sense that he/she teaches directly or indirectly.

Secondly, lack of time for multimedia usage was mentioned as a major disadvantage. The teachers were however educated on the need for self-censorship because with proper organization of teaching activities, a normal time frame for execution is achievable. The teacher determines the scope and type of teaching contents, the time for mastering them and the length of time for multimedia usage, given the pupils' previous knowledge, interest and concentration span, thereby excluding stereotypes and monotony. If that happens, they are

replaced by more productive, more effective ones and that disadvantage is eliminated. The underlined disadvantage of multimedia that pupils spend less time in nature and that it limits the need of children for activity is correct.

Furthermore, the third disadvantage of multimedia in classroom as mentioned by the respondents is that "pupils often neglect the aim (educational tasks) and understand it as entertainment". Again, the teachers were informed that it depends on the teachers' approach and self-censorship of the teacher. Since entertainment and learning are separate, he/she fails in the role of leader and guide of teaching work towards pedagogical-educational achievements.

Through an analysis of teachers' responses to questions of what the disadvantages of multimedia are in their opinion, dissimilarity was noticed. They responded that lack of activity and socialization would be the greatest problems in multimedia usage in class is partly true as lack of activity and socialization are mentioned, not as the biggest or most common problems, but as one of several mentioned. The most common disadvantages of multimedia are time and lack of multimedia in school according to other teachers. A link between these answers of teachers with the replies to the question: 'what obstacles do teachers have in multimedia usage' was noticed.

The average numbers of teachers stated that there were no obstacles in multimedia usage, which means that they use multimedia in class without any inhibition. With other teachers, the greatest inhibiting factor is lack of multimedia in school.

Apart from those disadvantages, the teachers stated a poor choice of multimedia as regards unsuitability of contents, unskilled for application of multimedia, lack of communication between the pupils and teachers, neglect of direct experiences from nature, large class populations, etc. Similar to advantages of multimedia, a link and correlation was observed between lack of multimedia and elements of the didactic methodical field, in accordance with the poly-factoral model of teaching.

4.5 Dramatic Activities that Stimulate Youngsters Learning in the Classroom Educational Video Programme

4.5.1 Mime

John Dougill defines mime as “a non-verbal representation of an idea or story through gesture, bodily movement and expression” (17). Mime emphasizes the paralinguistic features of communication. It builds up the confidence of learners by encouraging them to get up and do things in front of others. Mime helps develop students' power of imagination and observation and can also be “a source of great enjoyment” (Dougill 18) with students tending to be very enthusiastic about this aspect of drama. To the language teacher, mime is acting out an idea or story through gesture, bodily movement and expression, without using words. Mime helps learners become comfortable with the idea of performing in front of peers without concern for language. John Dougill supports this when he says that not only is mime one of the most useful activities for language practice; it is also one of the most potent and relatively undemanding (17). Its strength lies in that although no language is used, the mime itself can act as a catalyst to generate and elicit language before, during and after the activity. Rose (25) corroborates this thus: “mime is a great way of reinforcing memory by means of visual association, and recall of language items is assisted whenever an associated image is presented”.

“Mime can help to fix language in the minds of the students, and the following activity demonstrates how vocabulary items can be revised and reinforced” (Dougill 19). Placing a box in front of the class for instance, the teacher mimes taking something out of it and asks students to take a guess at what it could be. The teacher then invites a student to approach the box and whispers the name of the object to the student, who in turn mimes taking the object out of the box while the rest of the class guesses. Mime can generate language use where explanation is required. If the mime involves pair work or group work, learners normally find it easier and more motivating to produce language when they have to accomplish a task.

If the mime is then performed before the rest of the class, the target language can be usefully employed for evaluating and interpreting what has been seen; as in the following example which aims at practicing fluency. Working in pairs or small groups, students are given topics to work on which are to form the basis of a three minute mime (a burglary that goes wrong, an incident at a bus stop, an argument at the cinema, for example), five minutes are allowed for preparing and rehearsing. Students perform their mime in turn, and after each performance the teacher asks the class to interpret what it has seen and done.

4.5.2 Role-Play

According to Blatner; "role play is a method for exploring the issues involved in complex social situations" (2). McCaslin concurs with this viewpoint as he asserts that: "the focus is on the value that the assumption of the role has for the participant rather than for the development of an art" (29). In role play, the participants are assigned roles which they act out in a given scenario. Thus, role play prepares second language learners (L2) for L2 communication in a different social and cultural context. The purpose of role play is educative rather than therapeutic and the situations examined are common to all. Family scenes, school situations and playground incidents provide opportunities for interaction and group discussion.

Role play enables participants to deepen prior experience and to translate it into characters for the plot. In this way, the participants are able to adopt roles hither to alien to them, and to try what it feels like to be on the other side for once. The main benefit of role play from the point of view of language teaching is that it enables a flow of language to be produced that might be otherwise difficult or impossible to create. Role play can also help recreate the language students used in different situation, the sort of language students are likely to need outside the classroom. By simulating reality, role play allows students to prepare and practice for possible future situations.

Ideas for role play could be obtained from situations that teachers and learners experience in their own lives, from books, television programmes and movies or from their daily interactions with other people at school, homes or in the work place. After choosing a context for a role play, the next step to follow is to provide ideas on how this situation may develop. It is important to take into consideration the learners' level of language proficiency when using and implementing role play activities in the Foreign Language classroom. Assuming a role is an essential element in drama, Heathcote concurs that: "role taking is so flexible that when applied in education, it will suit all personalities and teaching circumstances" (36)

Broadly speaking role-play involves being an imaginary person usually in a hypothetical situation and sometimes in a real one. Role play is a class activity which gives the students the opportunities to practice the language aspects of role-behaviour, the actual role they may need outside the classroom. According to Richards; "role –play involves a situation in which a setting, participants and a goal problem are described. Participants are to accomplish the task given, drawing on whatever language resources they can" (6). From the above definitions we can come up with the conclusion that role-play is thus an activity which requires a person to take on a role that is real or imaginary. It involves spontaneous interaction of participants as they attempt to complete a task.

There are many types of role play. Some of such are dramatic plays, story dramatization and socio-drama, seminar style presentation, debates and interview. Different types of role play demand different approaches, the way the role play is introduced, the description of the roles, the facilitation and debriefing sessions vary accordingly. Role play requires students to talk in the classroom performing different role and tasks.

4.5.3 Simulation

Jones calls a simulation as case study where learners become participants in an event and shape the course of the event. “The learners have roles, functions, duties, and responsibilities within a structured situation involving problem solving” (Jones 21). Simulation is a structured set of circumstances' that mirror real life and in which participants act as instructed. Jones defined simulations as “a reality of functions in a simulated and structures environment” (Jones 13).

A simulation activity allows learners discuss a problem within a defined setting. In simulation activities, the students are either playing themselves or someone else. Simulation activities are also interaction activities with various categories of dialogues. One category is social formulas and dialogues such as greeting, parting, introductions, compliments, and complaints. Simulation exercises teach students how to function in a social situation with the appropriate social niceties. For example, students could practice how to turn down a request for a date or a party. Another category of simulated interaction activity is community oriented tasks, where students learn how to cope with shopping, buying a ticket at a bus stop etc. This sort of simulation helps students’ communicative participation in the community and at the very least helps them in the task of collecting important information.

A clear line cannot be drawn between role play and simulation. These two drama activities overlap. Role play is frequently used within simulation in role-simulation; the participant remains the same individual while reacting to a task that has been simulated on the basis of his own personal or professional experience. In language teaching the differences between role play and simulation are not that important. Apparently the main concern for the language teacher is the opportunities role play and simulation provide for the learners to express themselves.

Simulation gives participants the opportunity to practice taking on specific roles and improvising within specific situations on the assumption that with practice the participants will play their roles more effectively when situations involving similar skills occur in real life. A simulation activity provides a specific situation within which students can practice various communication skills like asserting oneself, expressing opinions, convincing others, arguing eliciting opinions, group-problems-solving, analyzing situations, etc. Using given details of the relevant aspects of situation, participants have to make decisions or come to some agreement or resolve a problem, thus meeting a challenge posed by the simulated situation.

Behaviour is not controlled in a simulation and the participants bring to the situation their own skills, experience and knowledge. Simulation can be effectively applied to teaching comprehension/lexis and English for Specific Purposes, because it is useful in practicing and evaluating the use of procedures and language (vocabulary, and structures) specific to particular skills. A typical simulation used in business English would be that of a board meeting discussing a company crisis, rules would be allotted, an agenda drawn up and the procedures and conventions of a board-meeting adhered to.

4.5.4 Improvisation

Landy defines improvisation as "an unscripted, unrehearsed, spontaneous set of actions in response to minimal directions from a teacher, usually including statements of whom one is, where one is and what one is doing there" (39) The focus is thus on identifying with characters, enacting roles and entering into their inner experience of imagination and fantasy. According to McCaslin; "the focus of improvisation is on helping learners to discover their own resources from which their most imaginative ideas and strongest feelings flow, participants gain freedom as self-discipline and the ability to work with others develops" (62). Hodgson and Richards in their book *Improvisation*; define the term as "spontaneous response to the unfolding of unexpected situation" (13).

Improvisation is an excellent technique to use in the FL/L2 classroom as it motivates the learners to be active participants in authentic situations thereby reducing their self consciousness. At the beginning students will be hesitant and shy to participate in the activities, but after a few sessions they will become more enthusiastic and there will be a phenomenal improvement in their confidence level. According to McCaslin: “dialogue in improvisation is apt to be brief and scanty at first, but with practice; words begin to come and the players discover the possibilities of character development when oral language is added” (64). The implementation of techniques that aim to improve the Foreign Language learners' confidence level will invariably lead to improvement in the use of the target language. Improvisation provides learners with opportunities to not only improve their language communication skills, but also to improve their confidence which will ultimately lead to the development of positive concepts.

Before beginning the improvisation session, the teacher or the facilitator has to involve the establishment of a context which serves to inform the participants where they are and what they are expected to portray in their inter-relationships with other characters. Since this is an unscripted, unrehearsed drama exercise, the participants are at liberty to make their own spontaneous contribution as the play unfold. This entails that they have the freedom to add their own words and develop their characters in the ways which they would like to. Thus one of the advantages of improvisation is the level of freedom that the participants are able to exercise during the execution of the creative session.

Improvisation exercises could involve an entire class of learners or smaller groups. Once the context has been provided the learners will participate spontaneously in the exercise. A whole class improvisation exercise could involve the participants at a market where some are the buyers and others the sellers. The teacher role is to provide the context and the participants act out their roles spontaneously without any planning. However, it is important to

keep in mind that much of the content for the improvisation activities could come from the participants' own background and experiences.

Spontaneous improvisation gives learners practice in language and communication skills, and they have the opportunity to develop their emotional range by playing roles unfamiliar to them and outside their own experience. Here are some examples of improvisation, keeping in mind that the backgrounds of the players will determine the appropriateness of these examples.

1. You are a group of people at a party having a good time. Decide who you are and what you are doing.
2. You are a group of teachers on strike for higher pay.
3. You are a group of parents attending a parent meeting who are complaining about the poor facilities and teaching.

These activities and others can be used by the teacher in his class. Also these activities and their varieties depend on the creativity of the teacher who can think of useful situations where he can generate students' communication skills.

4.5.5 Music

Researches have shown that good early childhood music integrated into the classroom helps children learn more rapidly. Musical intelligence, when incorporated in a in the classroom learning situation can stimulate listening skills, emotional awareness and creative thinking. Jensen builds a strong case for the application of music in enhancing listening skills. He contends that "music improves biological survival, cognitive structures, concentration and memory" (14). The emotional importance of sound and the observation of rhythm of music can stimulate emotional sensitivity.

Listening to music "improves emotional awareness" (Nelly, 33). Children who listen to music often find the identification of emotions easier and can better manage their feelings. Misunderstanding tone of voice or verbal constructions can create negative results. Listening is an analytical process. Enhancing musical listening skills can improve the ability to voice tone,

tempo and volume when expressing emotional meaning. Many strategies can be included in a curriculum to heighten the awareness of the sense of hearing. Campbell et al suggest that "music may be used for skill building by using songs, improving language or mathematical skills" (131). They suggest that it can be used to create curriculum songs. It soothes emotion, draws attention or jump-starts creativity. Campbell et al further confirm that "… listening to music for just an hour a day may change brain reorganization" (132). This implies that there is more brain coherence when listening to music. The incorporation of the sense of hearing alerts the brain to incoming information.

With limited time available in the school hours Drama Activities Educational Videos may create the opportunity for children to become aware of the relationship between music and emotions. Awareness of the different auditory structures of emotions can improve sensitivity to the tone of voice, which influences the meaning in communication positively. Using music in a Drama Activities Educational Videos programme can help as an attention grabber to create a more intense sense of emotional awareness in the participants. Using a rhythmic song can enforce the memorization of certain concepts. Auditory learning creates spatial awareness. The senses are complex and interrelated. Incorporating music into a creative drama programme may add a deeper dimension of emotional experience.

Furthermore, reading, understanding and speaking a language requires the ability to identify where syllables and words begin and end. This skill is called phonological ability and uses the same areas of the brain used to identify and break up sounds. These are important skills that we gain through experience, and they help us understand our native language and new ones. Studies have shown that musically-trained children have better phonological skills, which can help them to learn words faster, develop a richer vocabulary, and learn to read sooner. Children are naturally interested in music, and music is naturally good for children. The reasons children find music attractive are listed below:

I. Music is a language, and children are oriented toward learning language.

II. Music evokes movement, and children delight in and require movement for their development and growth.

III. Music engages the brain while stimulating neural pathways associated with such higher forms of intelligence as abstract thinking, empathy, and mathematics.

IV. Music's melodic and rhythmic patterns provide exercise for the brain and help develop memory. Who among us learned the ABC's without the ABC song?

V. Music is an aural art and young children are aural learners. Since ears are fully mature before birth, infants begin learning from the sounds of their environment before birth.

VI. Music is perfectly designed for training children's listening skills. Good listening skills and school achievement go hand in hand.

VII. Developmentally appropriate music activities involve the whole child-the child's desire for language, the body's urge to move, the brain's attention to patterns, the ear's lead in initiating communication, the voice's response to sounds, as well as the eye-hand coordination associated with playing musical instruments.

VIII. Music is a creative experience which involves expression of feelings. Children often do not have the words to express themselves and need positive ways to release their emotions.

IX. Music transmits culture and is an avenue by which beloved songs, rhymes, and dances can be passed down from one generation to another.

X. Music is a social activity which involves family and community participation. Children love to sing and dance at home, school, and at church.

XI. Music brings people together**.** Through music, children take an inner experience and move it into a shared creative experience. Group music-making releases energy which can be channeled in creative, productive directions. Children learn about themselves and others by playing music together and by listening to each other — tapping into hidden courage that can be played out by singing together or discovering the inner resources to listen quietly to another child's playing.

XII. Resilience; to bounce back after a disturbing event is not something we are born with; it must be learned and sometimes that takes many years. There is no vehicle more joyful and playful for providing such training than early childhood music and movement.

XIII. A rich voice opens the ear and gives energy to the nervous system. Not only does it help children process and memorize the message, but it also increases their desire to listen more, learn more, and know more. A good voice fills the cognitive and emotional brain.

XIV. Speech and music have a number of shared processing systems. Musical experiences which enhance processing can therefore impact on the perception of language which in turn impacts on learning to read.

4.5.6 Puppets/Animations

A puppet is an inanimate object or cool figure animated or manipulated by a puppeteer, manually or mechanically. The use of puppets (including visual expression and music) can result in a considerable contribution to a more humane and less stressful educational system in the first years of a child's integration into a group. Moreover, puppets arouse imagination and creativity. This is one of the simplest and most effective ways to develop support to the child's curiosity about environment: and when it's filled with the arts – children will accept this same method of communication, to respond through the language of the arts (Majaron 9).

Carol Sterling, former advisor for puppets in education to the Puppeteers of America argues that puppets offer children the conditions for achieving the following educational goals:

- stimulate creative expression,
- stimulate and increase imagination,
- develop spontaneous verbal expression,
- improve language and pronunciation,
- practice writing and fluent reading skills,
- acquire the feeling for evaluation of literature,
- stimulate mutual cooperation and develop orientation in time and place,
- stimulate the child's self-value,
- acquire self-esteem and personal content,
- released fears, aggression and frustrations in an acceptable way,
- develop social-interactive skills. (Cited in O'Hare 6)

O'Hare also added the following goals: master problem-solving skills, improve fine motor skills, improve listening skills, learn to accept and to give ideas, observe the world with all senses, remembering the observed, processing it reviving it, through puppets and assess work. Working with puppets enables students to reach all the above mentioned goals, which are part of the contemporary curriculum.

4.5.7 Dance

> I believe in action and activity. The brain learns best and retains most when the organism is actively involved in exploring physical sites and materials and asking questions to which it actually craves answers. Merely passive experiences tend to attenuate and have little lasting impact. (Gardner 82)

When "dance activities are integrated within the daily curriculum: engaging and numerous learning experiences transpire for early childhood learners" (Chauhan 36). Besides being "fun" for most children, "kinesthetic activities can help young learners, especially English language learners, develop decoding skills, fluency, vocabulary, syntactic knowledge, discourse knowledge, and metacognitive thinking" (Sun 52). "Teaching language skills through drama and movement gives children a context for listening and meaningful language production, provides opportunities for reading and writing development" (Chauhan 40), and "involves children in reading and writing as a holistic and meaningful communication process" (Chauhan 40). In addition to the development of gross and fine motor coordination skills, creative expression and thinking, social interaction, problem solving, cooperative play, rhythm, and rhyming skills can be enhanced.

"Young children are often more receptive to any kind of drama activity since they are closer to the exploration stage of development" (Royka 32) thus, early childhood teachers often use games, play, and drama activities in their daily classroom instruction. Integrating drama and movement techniques into the early childhood classroom can be especially effective in the development of language proficiency for English language learners (ELLs). These "kinesthetic, authentic experiences use language in an interactive context" (O'Malley & Pierce 26).

It is widely understood that it is during the school period that young children begin to understand who they are in relation to others. It is at this time that they move away from their parents expanding social relationships and taking on the developmental task of building friendships with peers. Researchers Azmita and Montgomery indicate that "interactions between children of this age; four to ten years promote a range of cognitive and learning skills with children becoming increasingly competent in cooperative play, taking turns, sharing and understanding the perspective of others" (23). A recent study undertaken by Lobo and Winsler

has provided “strong empirical evidence for the effectiveness of dance in supporting the development of both self-confidence and social competence, with the study highlighting the reduction in behaviour problems of participating children over the course of the eight-weeks program” (26).

4.5.8 Colours

Colour, is one of the most noticeable attributes of the world around us. For babies and small children, understanding colour is an essential building block they will use for learning in all areas of their life. So when it comes to designing kids’ spaces, colour is one of the most important elements to consider. Not only does colour play an important role in the overall aesthetic of a space, it can also impact an individual’s mood, emotional wellbeing, productivity, learning and behaviour.

There are many things that are important to a child’s development. Visual learning is a vital aspect of this and everything from colours to cartoons influences how a child discovers the surrounding world. To a child, the world is an interesting place, with so much to discover and explore. It is important, therefore, to present children with as many opportunities as possible to learn from the environment around them. On the visual spectrum, both colour and cartoons play a significant role in engaging a child, helping to both inspire them and pique their curiosity.

Colour recognition can provide children with essential learning tools in life. For example, in mathematics, colour recognition is used to categorize, sort, compare and organize. Additionally, as children learn to identify colours and use colour as a language tool to describe things, it develops and strengthens their ability to communicate effectively. Thus, by teaching young children colour and through colour (including shades, tones and hues), we also help them to use colour as a means of creative expression in all aspects of life. With colours as

teaching aids children learn to use colour as a visual cue to identify danger (red) and distinguish hot from cold.

4.5.9 Toys

Children need to have direct experience with the world in order to make sense of and learn about it. Have you ever thought about all the things children learn after they are born? They learn how to talk, sit up, walk, and run. They learn what things are and how they work. They learn about people and the world. They learn all of these things by playing with toys.

For example, babies are not born knowing about gravity. They do not know that anything dropped will fall to the floor. They learn this, by playing with toys. Infants may accidentally let go of a rattle and notice that it falls to the floor. When you give it back, they may deliberately drop it to see if it falls again. Sure enough, it hits the floor! They enjoy the game "drop the toy" for as long as you are willing to play. Soon everything in their grasp becomes a toy for dropping - bottles, spoons, balls, and even bowls of food. They practice this "experiment" and play this game with everything they touch. They understand about gravity because they have actually experienced it with their toys.

Toys are important for other reasons, too. Children exercise their muscles with toys. Next time you see children rocking horses or riding bikes, notice the muscles they are using. Think of the coordination and balance they practice when they climb to the top of the jungle gym or the muscle control they develop when they put one more block on the tower without it falling down. All these necessary skills are developed easily through toys. Toys also invite children to create and use their imaginations. Give an empty cardboard box to a child and watch all the things it becomes - a train, house, or cage at the zoo. Children start many play times with “Let's pretend...” and toys encourage this.

Children gain self-confidence as they play with toys. As children master their toys - as they finish a puzzle, ride a trike, or blow a bubble - they develop a sense of power. They say, "I can do this. Look at me." As a caregiver, we often may find children want to show us what they can do with their toys. It is important to recognize their accomplishments. When an adult pays attention to children's play, they feel worthwhile and gain self-confidence. Their self-concepts grow stronger. Along with building self-esteem, toys can be the basis for friendships. Toys like teeter-totters only work when children cooperate. Projects like building sand castles go faster with friends.

Children often talk more easily to one another over toys. Playing with toys in a group helps children discover how others think and feel and what brings approval or disapproval. They learn what happens when they share the truck they are playing with or when they refuse to share and the truck is taken from them. With toys, children can use energy and discover emotions. Children have lots of energy. It may not be okay for them to use their energy to jump on the bed, but it is almost always okay for them to use it to ride a trike or bike. Toys also are useful as a way to deal with working through emotional conflict or anger. Splashing water or pounding play dough can help children release tension.

4.6 Rationale for Integrating Dramatic Activities (Creative Dramatics) Educational Videos into the Curriculum

Drama, although not new to humans has had an integral impact on history and those who lived through it. Drama and theatre arts have been around since ancient times. “Most familiar to us in the Western world is the theatre of ancient Greece, which developed from celebration and dance into a golden age of theatre” (McCaslin 271). This form of art and its artists were highly respected. “Plato, in The Republic, advocated play as a way of learning. Aristotle urged education in the arts, distinguishing between activities that were means and those that were ends” (McCaslin 271). Drama was used to teach, and as a form of entertainment.

While the use of drama as a medium for teaching is not new ideas, Nigeria is yet to embrace its use as a teaching medium for the elementary curriculum. Arts advocates have succeeded in bringing drama and theatre arts into the schools as an entirely separate program. Even this is still lacking in numerous schools. Educators who use drama to teach their students are finding it to be a very successful method and therefore, are spreading the word. Thus, an elementary problem that typifies the Banking system is its narrative character, wherein the learner is a passive receiver of information. This becomes apparent in the education material as well as classroom ethics in India. Hierarchically superior, the teacher transmits information to learner. Additionally, text books are considered storehouses of knowledge that must be uncritically accepted. In such an atmosphere the student is not an active creator. Drama on the other hand is characterized by action - verbal, gestural and physical. It works on the assumption that learning occurs as much through pro-active kinetic activity and association as through more intellectualized approaches.

The fundamental educational activities of reflection and comprehension can be followed up with practical enactment through drama. Intrinsic to the nature of drama is the notion of play - the idea that the child can reconstruct narratives in action. For instance, the narrative of the conquest of a fort taught as part of a history class can be followed up with an activity where learners are engaged in improvisations related to that event. Enactment of different aspects of the scene can enable a more comprehensive understanding and bring in several perspectives. For instance, students can actively and imaginatively engage with phenomena like horse riding, mountain climbing, handling weapons, all related to the conquest of a fort, but not part of the history textbook. The dramatic space is one of action and allows for a positive involvement of the learner and enables physical, intellectual and emotional participation in the process of learning.

The possibility of knowledge acquisition that drama provides also includes a process of meaning making that involves personal experiences, dreams, fantasies and individual

specificities. Dramatic tasks help in building links between printed information and experience. The learner uses his/her perspective to relate to the world and enters the imaginative reality of information thus expanding narrow visions and perceptions acquired in the classroom. Instead of learning to accept the world as pre-given, the child learns that she can create her own world through action and in an imaginative fashion. Along with enabling a process of meaning making, drama also equips the learner to develop thought, feeling and language potential to express this meaning thus erasing the gap between comprehension and expression.

Drama encourages the essential human activity of expression, not for evaluation but for communication. Through drama the child learns to express verbally and non-verbally. The use of one's body is as important in drama as is the use of one's voice. Such a process is not restrictive and the learner can express using speech, facial expression, movement, gesture thus relating to the world in multifarious ways which are not limited to structurally accepted modes of being. This process of expressing using the entirety of one's self also allows children to explore hitherto unknown facets of their personality. They become more comfortable with their bodies and acquire the confidence to vocalize personal opinions. The process of overt expression which is so intrinsic to drama also brings human emotions into the realm of education. Restricting education to facts that are devoid of human emotions creates a schism between the human learner and what he/she learns. The acknowledgement and expression of emotions gives the process of education an essential "humane" character.

Drama also helps bring about an essential understanding of human beings. While reading and writing are essentially personal activities, drama is a social, interactive activity that follows a participatory model. Group activities are primary to drama and the student is involved in the bedrock of human reactions. Students learn from the conscious and unconscious imaginative experiences of peers. “The dramatic space allows for the possibility of dialogue, of engaging creatively with others thus enabling an insight into human nature”

(Obadiegwu 302). The minute the child engages in a dialogue with someone, his worldview that was focused on the individual self gets directed towards the other. Group activity performs the function of reinforcing the known and helping discover the unknown. The stage allows for the recreation of situations that are otherwise inaccessible to the immediate experiences of the learner.

With regards to understanding human beings, drama performs a dual function. It is on the space of the stage that one meets various interesting characters. Children are given opportunities to understand the dreams, desires, motivations and emotions of different kinds of people. They also learn how to imaginatively adopt these characters. Students can slip into the skin of various characters and from one role to another, tangibly experiencing for themselves, emotions and desires that are different from theirs. An understanding of others happens through an understanding of the self. Thus, in the process of becoming other people, the learner also arrives at a better understanding of herself. They analyze their own patterns of behaviour, the motivations that lie behind them and become open to the possibilities of change. A large portion of drama education is dedicated to the revelation of the nature of man with all its complications and contradictions. The use of drama in classrooms aids the creation of self-conscious and perceptive individuals who are capable of creating their own unique narratives as well as existing in empathy with others.

One of the most important functions that drama performs is developing the imaginative abilities of the learner. The drama class need not be a uniform mass and every individual child can be an independent unit whose imagination is nourished. Not guided by a fact-based formula, there is very little scope for drawing up rigid categories of right and wrong in drama. Our daily lives are characterized by flows of fantasy, memory, speculation, desire which punctuate our every action. For the most part such experiences remain unacknowledged, unspoken, inner and private. Drama allows for their realization without inhibitions. A dramatic mode of education does not approach texts and narratives through rigid structures. For

instance, dramatizing a story need not be a restrictive sequential process. The learner can imaginatively cross over into the world of the story at whatever point he/she wishes to and elicit meaning from that point onwards. One core dramatic exercise is that of improvisation. While improvising a particular narrative story, one need not follow it a mimetic fashion, aiming to merely reproduce all its details. One can draw issues, themes, moods, characters, conflicts from the narrative and modify it to produce alternative narratives. Originality and spontaneity are encouraged in drama. The learner can read aloud the story, perform, build on the story by designing new contexts, and find analogies and dichotomies by placing it alongside other stories. Thus, the drama classroom allows a range of ways in which the learner can engage with narrative.

The dramatic exploration of narratives also helps develop critical faculties of questioning and reasoning. To begin with, the world is not accepted as a given in the drama class. It has to be invented and re-invented through one's own experiences and perspectives. Meaning is not passively received from some higher authority, but is created actively. This nurtures the critical faculty of questioning and independent thought. Similarly, when one engages with narratives through improvisation, one brings the story alive outside the text. Once outside the given structure the story can encounter various conflicts and contradictions. Drama encourages learners not to be satisfied with simplistic solutions but to struggle with layers of meaning: while engaging with drama there always exist the possibility of applying the "what if" element to accepted systems of knowledge. As drama education is less of a subject and more of a holistic experience, it allows learners to move beyond defined boundaries and make connections that are not possible in other classrooms. It enables intellectual, emotional as well as imaginative and aesthetic development.

Drama as a tool in media education and classrooms opens up multiple avenues and possibilities for learning and being that are learner centered and in contrast from the Banking concept of education. In the Nigeria context, the school classroom varies across contexts and

geographical areas in its infrastructure, composition, needs and aims. Drama as a pedagogic tool has the capacity of adaptability and can be used in a meaningful manner to transform learning from a static activity into one that is immediate, action packed and relevant to the lives of the students.

A study by Kaaland-Wells in 1994, cited in Wagner showed that "teachers who had taken a college drama course were more likely than the others to feel that it should be a part of all teacher training, and they were more likely to view it as effective" (12). This study is of the opinion that knowledge is power and students should love to learn. While this researcher feels that all of the arts can be influential learning tools, drama is especially powerful. Betty Jane Wagner asserts that "drama is powerful because its unique balance of thought and feeling makes learning exciting, challenging relevant to real-life concerns, and enjoyable" (9). As educators, if we are not providing a fun and meaningful learning environment for our children to learn, then we are not doing our jobs.

Research indicates that using drama in the classroom as a means of teaching helps students learn academically, socially, and developmentally. "The use of drama as a tool for teaching is not new. Historically, both drama and theatre have long been recognized as potent means of education and indoctrination. The ways they are used today, however, are new, and they differ in a number of respects from the ways they have been used in the past" (McCaslin 271). Arts advocates and educators have recently started to explore the use of drama as an integrated way of learning the curriculum. It can reach students, who otherwise couldn't be reached, and challenge students who have already grasped the concepts. Drama provides a fun means of learning. It brings the affective back into the classroom, an institute where emotions and learning are categorically divided. Recent brain research proves that emotions are linked with learning. When we connect to the concept emotionally, we will have a better understanding of it. When we teach using the arts we are linking prior experiences with new stimuli. Teaching using drama brings emotion and learning together.

Most importantly of all, using drama to teach in the elementary classroom gets students involved and gives them the power to have a key role in their education. Jeffrey D. Wilhelm, who wrote the article, “Drama is Imagining to Learn: Inquiry, Ethics, and Integration through Drama,” writes, “Through drama, students became a part of the learning process rather than mere observers or inactive receptacles of the rich experience of learning; in this way, their learning was deeper, more sustained, and infinitely more complex” (cited in Idogho130). In a similar vein Obadiegwu avers that: “what theatre-in-education does is to transform the learner from what he/she is; empowering him/her to make changes in his/her own lives, as well as that of society (199).” This paper has therefore demonstrated chronologically the validity of using drama to teach students and the elementary curriculum. Through research of the arts, drama in particular, and a close look at how people learn, one can attest that teaching using drama can enrich the classroom environment.

It is often said that there is no way to freedom; freedom indeed is the only way. Similarly to foster a spirit of enquiry, to look at larger issues and concerns beyond self, a climate that encourages it needs to be created. Children are naturally holistic thinkers and compassionate beings who have a sense of wonder about the world around them. All it takes is to allow them to experience the world 'hands- on, think, feel, question and learn. For instance, when children have opportunities to befriend a tree by hugging a tree, climbing it, singing a song about it or taking care of a garden patch - a vital connection is established. When they have a real engagement with a craftsperson and experience him and the marvelous world that is his - be it pottery, carpentry, weaving or spinning, their frames of reference expand and their ability to appreciate differences get strengthened .When children experience the natural world first hand, their love for it gets kindled. When children work together and engage with their immediate surroundings in a live manner they learn to collaborate and be in touch.

If we want holistic thinkers then we need to address the 'whole' child and not just from 'neck up'. We need to encourage habits that do not set the mind in opposition to nature. The

curriculum needs to be expanded /enriched to include material with fresh perspectives. Each individual needs to be given room to work according to his/her rhythm. “The focus needs to shift from information transmission to real search and exploration through different media-be it articles/toys/films etc.” (Idogho 131) The volume of content needs to be reduced and assessments need to be done differently. We need to give opportunities to experience a sense of community and a feeling of co-ownership. We also need teachers who are facilitators and co-travelers and not just transmitters of information. Teachers who can kindle the spark in children, who can strive to see the larger picture and celebrate diversity in children.

4.7 Conditions for Planning/Forming Multimedia Educational Material

The basic aim of forming multimedia is to create high-quality teaching resources which will be used to impact the developmental changes in pupils. In doing so, there is a need to meet certain criteria. “Didactic formation of teaching media implies structuring of content with optimal consideration for former questions and expert answers to them. Attention is paid to “level of presentation”, use of technical terms, redundancies, the nature of tasks for those learning, visualization of content, extent of “steps” in presenting basic content, aesthetic formation of media etc. For a complete fulfillment of the given criteria, there is a need to ensure team work of various experts.

It can be concluded that formation of multimedia educational material is a complex activity and thus we should think about: suitability for pupils, quantitative and qualitative structure of information, as well as implementation of these in teaching strategies, since quality educational material should be used in the best possible manner in class. An example for this type of action also represents application of the cognitive theory of overloading in the process of learning, since it influences the teaching strategies of teachers, as well as the formation of multimedia. The significance of applying this theory is in recognizing different levels of pupils’ previous knowledge and adapting multimedia teaching material to the individual

possibilities of the pupils in learning. “If previous knowledge is lacking, there is a need to reduce unimportant cognitive overloading by applying teaching methods that compensate for the pupils’ deficiency in knowledge. Methods for satisfying pupils with lower levels of previous knowledge are:

i. Prepare easy-to-understand displays,
ii. Use relevant images,
iii. Explain images with sound or integrated text (not with both),
iv. Avoid unnecessary explanations
v. Not adding words for self-explanatory images,
vi. Not explaining visual images with sound and text simultaneously,
vii. Writing succinctly, clearly and keeping it short,
viii. Avoiding unimportant themes,
ix. Use direct outlines of lessons,
x. Use slow blending of work examples,
xi. Well-thought writing of text.

If the previous knowledge of the pupils is rich, overuse of teaching methods should be avoided, with respect to pupils’ knowledge. Ways of satisfying pupils with rich previous knowledge are:

i. Do not add unnecessary explanations in the form of image or text,
ii. Define practical exercises rather than working examples or finishing off examples,
iii. Do not put extra effort into high-quality texts,
iv. Use direct teaching which stimulates discovery.

If there are pupils of various, rich and poor, levels of previous knowledge in class, be adaptive to the differences. Ways to satisfy pupils with different levels of previous knowledge are:

i. Use adjustable teaching, electronic learning,
ii. Use preparations for leveling out understanding,
iii. Carry out preconditions, assumptions,
iv. Use pre-tests for determining suitable segments for pupils,
v. Divide pupils into groups of beginners and advanced. (Clark, Nguyen and Sweller, 295)

From the above-mentioned, it can be concluded that in forming multimedia teaching material, it is important to satisfy the psychological, Multimedia and didactic-methodical conditions. These conditions have an interactive relationship. In forming multimedia “it is important to didactically devise a role for each medium in a multimedia combination.

Unnecessary repetition of the same content through different media should be avoided. In combining multimedia, each individual medium should be given certain didactic roles

which will depend on the characteristics and advantages of the medium itself as well as on the mental condition of attendees and class goals" (Matijevic 72). Psychological conditions relate to the developmental level of the pupils and require suitable didactic methodical strategic work of the teacher and pupils, as well as forming different developmentally suitable multimedia teaching material, compatible with computer science laws. Linking conditions for forming multimedia teaching material and criteria for choosing multimedia in class are apparent here. This means that in forming multimedia, attention should be paid to computer science laws, but their integration with other elements of a didactic-methodical field is also important.

4.8 Rationale for Using Multimedia Teaching Aids and as a Mode of Teaching and Learning

The choice and use of multimedia in teaching represents a relatively more recent problem-oriented area of research in media didactics; therefore this was one of the reasons for opting for the theme of multimedia in teaching, more precisely, the use of multimedia in primary school from kindergarten through Primary School. Scientists paid greater attention to exploring the media in the second half of the twentieth century while multimedia was researched in a more systematic manner with the appearance of computers and multimedia educational tools, in an Information Technology (IT) context, beginning in the 1980s of the 20th century. A million years had to pass to go from cave graffiti to first written symbols; thousands of years until invention of the printing press; three centuries passed in order to get from the printing press with large print to flat print i.e. recessed print (lithography); one more century until the invention of the rotational printing press and 60 years until the first computer, which was so huge that it occupied a whole room. 30 years later, the first personal computers appeared, and 10 years after that the first laptop (portable computer) arrived. Today, a hand-size computer can be kept in the pocket or linked with a mobile telephone. It can send an e-mail (electronic mail), photograph or fax. Maybe this device will soon make it possible to heat up a plate of pasta for us in the microwave oven before we arrive home (Petrina 7). These new technologies

are an integral part of many human activities and have implications both in pedagogy and education from pre-school to institutions of higher education. Technological progress in the economy, after having passed efficacy tests, is reflected on work in the classroom, imperatively changing it.

Unfortunately, these changes in the schooling system are very often slow as a result of inertia at all levels of education. However, the teaching process is slowly being updated; both in training personnel for teaching as well as in using media and multimedia, where technically more modern teaching devices and aids supplant outdated methods. If a school is equipped with more state-of-the-art multimedia, this is no guarantee that they will be practically used in the classroom. The personal and qualified-professional competence of the teacher who will decide how and to what extent multimedia will be used in the classroom is important. The basic aim is to use media and multimedia for the emancipation of development of pupil's rights and in order to have a more humanistic approach in teaching. Therefore, a teaching strategy which strives towards development of the pupil should be created.

New age pupils differ from previous generations in their lifestyle and activities. Every day they are surrounded by multimedia, the flow of information is faster than before and so the children of today are more informed than previous generations. Every day they seek information and use it. Pupils are skilled at using the computer, mobile telephones, play-stations, DVDs and other multimedia. Thus their needs transcend the level of traditional teaching which fill children's heads with mechanical information: That is how curricula are drawn up and that is how school textbooks are written. Those textbooks are full of unimportant information and, unfortunately, the majority of teachers consider that whatever is written in the textbooks should be memorized. The textbook is very important but it is not the only medium in teaching. Consideration is focused on theories which explain the essence and significance of using multimedia in the classroom.

Constructivism and theoretical cognitive approaches are significant for the study of developmental changes in pupils. It is important to have classes which transcend verbal or mostly verbal communication: this because the use of multimedia provides the opportunity for various types of communication i.e. transfer of information which stimulates the pupil's senses. Through multimedia, we motivate pupils to learn by using their different senses, and through audio-visual presentation of information, the pupils obtain clearer and more complete knowledge of the outside world and themselves. With use of multimedia, teaching is rationalized and more effective energy-wise because with less energy expended, it is possible to achieve better and better results with the pupils in learning.

Contemporary teaching technology does not negate the traditional teaching methods, but is based on them, expanding the number and significance of didactic teaching elements, observing through new relations. It could be said that contemporary teaching technology contains all positive achievements attained by mankind over the long historical development of teaching. In brief, it is a creative synthesis of certain elements which appeared in the past independent of each other and today they exist in a dialectic unity.

Each developmental level of teaching does not exclude the previous; as they contributed to new developmental levels of teaching i.e. they demonstrate its evolutionary flow. The teacher's work in contemporary teaching, focused on pupil development, is based on strategic activity: careful planning and organization of teaching, the role of the supervisor who stimulates the pupils in all types of development as well as a systematic evaluation of work done. The teachers play the main role in devising teaching strategies that provide conditions for development of all children's real and potential abilities as well as being sensitive to the needs of the pupils. The didactic-methodical competencies of the teacher play a decisive role in using multimedia in teaching conclusively with the educational policies of the teacher.

Therefore there is a need for ongoing upgrading of teachers in the technological area so as to be able to know when to use multimedia, which type and for what purpose. The

development of film, television and computers imposes imperatively a different education in the field of media and multimedia on the teachers. Today, when it is difficult to establish the boundaries between media, when one medium switches to another, when they interlink with one another in all possible ways, technically becoming more and more perfect, the unique difference among them disappears. The same audio-visual multimedia film can be viewed by the teacher with the pupils in a cinema, on TV networks, on a TV screen with the help of a VCR or DVD player, on a computer screen from the hard drive or from the Internet. Therefore, there is a need for educating teachers in the possibilities of using multimedia. Besides these technically highly developed multimedia, a major role in teaching is also played by multimedia that provide valuable information to the senses (e.g. an apple is a medium if it is only photographed, but if the pupils touch it, smell it and eat it, the experience of the apple provides more information, thus increasing the pupils' comprehension of it). It is interesting to find out which didactic criteria for multimedia evaluation is used by teachers when choosing a multimedia, which types and multimedia structures are used in the classroom as well as what views they have on multimedia, given the existing concept of class work in Nigerian primary schools.

In this connection, the opinion of the pupils is significant in relation to preference for the media used in learning. Through empirical studies, understanding will be gleaned on the use of multimedia in class. One of the teachers' tasks is to provide a multimedia environment for learning. A multimedia environment for learning can be rich and very stimulating. The immediate physical environment of the classroom includes teaching devices and aids with existing and new multimedia possibilities of transfer of information.

Contemporary teaching imposes the need to seek newer and better solutions of teaching and learning which lead to greater efficacy of class work. Because of this, the role of multimedia in teaching and their relationships with other elements of didactics is researched. Multimedia occupies a significant place in poly-factorial teaching models. As a carrier and

transmitter of information, it represents a source of learning as well as a tool to help in learning: different information of perceptual qualities from which the multimedia is composed and impact on the dynamics of learning; which further stimulates the different perceptive ways of learning as well as sensory integration. At the same time multimedia is in an interdependent relationship with other elements of didactic-methodical field. Therefore, this research is geared towards development of multimedia didactic theory and pedagogic-educational practice.

CHAPTER FIVE

CONCLUSION

5.1 Introduction

This study set out to investigate the impact of multimedia in classroom teaching and learning. It also attempted to establish what the attitudes of teachers and pupils were in relation to multimedia, especially when it is integrated with drama activities and interactive session (Interactive Learning Module) and in what way teachers can use multimedia in class. In accordance with the aim, all elements of research were elaborated methodologically: research objectives, research questions, hypotheses, methods, procedures, instruments, variables, populations and samples. Interpretation of results of the findings was also documented accordingly.

5.2 Summary of Findings

The central focus of the present study concerned the examination of the existing traditional teaching methods adopted in Nigerian kindergarten and primary schools as well as an assessment of the impact of multimedia, gadgets and mode of knowledge delivery application in the classroom as an alternative teaching aids and method in the lower primary school. In accordance with this concern, relevant theories of and existing researches on multimedia in education were reviewed. These theories and models provided insight into the basis of multimedia usage in learning and in the empirical usage of multimedia in teaching. Along with constructivism, theories and models which study the cognitive possibilities of learning with the help of multimedia were explored. Some such were the theory of information processing, cognitive theory of multimedia learning, theory of cognitive overload and the theory of multiple intelligence. These were examined to enhance the understanding of how humans learn through text and images as a structured model of teaching.

Since the word multimedia is polysemic, special attention was focused on the didactic

term of multimedia viz its terminological definition, relevant terminologies of multimedia in teaching, its structure, taxonomy, features, film, television and multimedia usage of computers in teaching. Positive and negative influences of multimedia on children are analyzed. Some of the possibilities of procedures through which children can correctly use multimedia are suggested. There is especially an explanation on multimodality in teaching which covers a wide possibility of choice of various media and multimedia and their combined usage.

More importantly, the relationship of multimedia with other structured elements of the didactic-methodical field was analyzed in various teaching models on the basis of which the poly-factorial teaching model was devised. The poly-factorial teaching model has the following components: pupil, teacher, other multimedia and media, curriculum, teaching principles, teaching aim, types of teaching activities, methods and techniques of teaching, social forms of work and spatial-material (physical) conditions. All are elements in interaction and complementary. The teaching strategy is defined as the skill of preparation, organization, leading and evaluating teaching activities by which pupils are taught and educated in order to achieve the teaching aims and give answers to the basic questions: *who, what, when, where, how, why, with what, how to proceed further?* Teaching strategies are changeable due to situational dynamics. Teacher and pupils are unforeseen human factors. Therefore teaching strategies mutually differ.

With this empirical research, knowledge was gained on multimedia usage in the primary schools classes investigated in this study, towards enhancing the quality of classroom learning effectiveness.

The scientific contribution of this study manifests in the promotion of the teaching process at the level of classroom teaching focused on quality of learning, with the primary school level in perspective. With inclusion of audio-visual senses in teaching and learning, a clearer and richer impression along with sensory interaction with pupils is created, thus impacting on awareness of their capacity. Through this, multimedia teaching and learning

provide for all pupils in the class the possibility of being successful. The conclusions of the research show that multimedia usage in teaching implies many didactic transformations of which the basic one is focused on developmental approach to pupils and transformation of the learner from the passive participants they use to be in the traditional chalk-and-talk method to active participants and co-creator of knowledge in the teaching and learning process.

5.2 Conclusion

In reviewing the situation in Nigeria Kindergarten and Primary schools classroom learning activities, the basic question is asked: How can more effective teaching focused on developmental achievements of pupils be engendered? However, the question is rephrased in this study to capture the research purpose thus: "Are there any significant differences in the Primary two pupils' performance in Arithmetic and English Language, due to the teaching strategies they are exposed to (using multi-media drama activities integrated with Interactive Learning Module (ILM) and traditional way)?" The answer to this question as identified in this study should stimulate the awareness of all structures of the ecological system (macro-system and micro-system). Until activities at all stated levels are carried out, we are going round in a vicious circle. This resonates with Hannaford (198) which identified that

> Weak school success can be attributed, to a great extent, to methods of teaching, especially in schools which do not adapt to differences in pupils' needs. Children learn differently, while schools favour certain learning and school work is focused on certain types of tasks. Generally, the school teaches, tests and marks logical mental tasks. Logic, sequence, calculations, categorization and verbal skills in school are highly rewarded abilities. Intuition, feeling, vision, humour, rhythmic movement, imagination and other gestalt brain abilities in school are neither practiced, nor tested nor particularly valued. It is only in the real world, outside the classroom, where success depends on entrepreneurship; imagination and insight that we start to appreciate the importance of the gestalt brain. School is very one-sided and many pupils suffer because of that bias, indulging in behaviour focused on survival.

On the basis of theoretical study of the impact of multimedia usage in class as well as the empirical results of research carried out in three schools across three states in the Republic of Nigeria, the major conclusions drawn are presented thus. In the theoretical analysis, it was

deciphered that theory and models which study the process of processing information, significance and specific qualities of multimedia learning are separated. Special attention was paid to the redefinition of media and the divisions and scope of multimedia. The leading ideas of the research are: constructivism, theory of information processing, cognitive theory of multimedia learning, theory of cognitive overload and theory of multiple intelligence. These were examined to highlight the understanding of learning with text and images as well as structured models of teaching as they study possibilities of learning generally along with multimedia usage in class.

The division of media taking into consideration the sensory characteristics is most frequently reduced in didactic literature to auditory, visual and audio-visual. In contemporary understanding of media, such a division is considered incomplete as attention should be given to all senses. Therefore, classification of media is shown with regard to manner of perceiving i.e. sensory experience acquired by pupils and this is divided into: auditory, visual, kinaesthetic, olfactory and taste. Media from all sensory areas are made up of various objects, material, machines, devices, animals, plants and people. Not all media are mentioned as it is impossible to list them all. This classification can be understood as conditional because of the kinaesthetic distinctive traits of media as one media can give more information of various senses (e.g. an apple has a certain colour, smell, taste and has a smooth, round surface).

The structure of multimedia is made up of individual media components. Each multimedia comprises two or more media. An example of media integration in computer multimedia is presented by (Jerram and Gosney 27) with the aid of static and dynamic media. “Static media are: text, tables, graphics and images and they display information which is fixed. Dynamic media represent: sounds, music, film, video, animation and simulation and they present information which is constantly moving” (Jerram and Gosney 32); these are in accordance with the drama activities packaged into the educational videos used in this programme. Any form of connecting static and dynamic media makes up multimedia

integration. Various combinations of media in multimedia teaching and learning impact on raising awareness of the personal capacities of the pupil as they encompass audio-visual sensory areas i.e. they correspond to the needs of various learning styles of pupils in class; however, in this connection attention should be paid to their suitability for the developmental age of the pupil. Multimedia usage stimulates sensory integration with pupils, thus impacting on success in learning.

The teaching process for Multimedia Drama Activities Educational Videos is based on a *poly-factorial model of teaching* which is made up of structured elements of the didactic-methodical field: pupil, teacher, other multimedia and media, curriculum, teaching principles, teaching aim, types of teaching activities, methods and techniques of teaching, social forms of work and spatial-physical (material) conditions. Such a model is understood to be flexible with a tendency for expansion (empty space is left for new elements). It is important to emphasize that teaching is observed in the context of a general system from micro-system to macro-system where mutual interaction and reflection of one on the other can be seen. The relationship of multimedia and other structured elements in the poly-factorial model of teaching is in mutual interaction and complementary. All structural elements of teaching are also components of teaching strategies. Teaching strategy is defined as the skill of preparing, organizing, leading and evaluating teaching activities with which we teach and educate pupils in order to achieve teaching aims. Teaching strategies respond to the basic questions*: who, what, when, where, how, why, with what, how to go further?* In practice, there are many authentic and unique teaching strategies.

It can be concluded that no two same teaching strategies exist. Teaching strategies are flexible forms as the teachers and pupils are unforeseeable human factors and each differs in frameworks of various structured elements of the didactic-methodical field. In teaching strategies, there are numerous possibilities of multimedia usage in teaching. During teaching

activities and school day, multimedia can be used: successively, simultaneously or a combination. Multimedia represents for pupils a teaching device for learning and a help towards learning.

In the empirical part of the study the drama activity that stimulates learning in the Drama Activities Educational Videos for classroom learning were identified namely: Music, Animation/ Puppets, Simulation, Mime, Dance, Role – Play, Toys (objects) and Colours. Each of these items was discussed in chapter four of the study. The existing concept of teaching in primary schools in the Nigeria is based on the Nigeria national education standard. Thus, the tendency of this research is for the Nigeria national educational system is to introduce a developmental approach to pupils of primary schools and targeted uniformity with the pre-school, secondary school and third-level pedagogical-educational system. Thus, in a balanced manner according to classes and define pedagogical-educational aims and tasks in accordance with developmental levels of pupils. Multimedia should be integrated into teaching subjects as a teaching device or tool serving the development of the pupil.

Under the cover of media culture one can speak of multimedia, but in such a way that it is outlined piece-meal only in teaching. Due to its specific qualifies, multimedia is acceptable in the teaching of all subjects. Multimedia is mentioned in the text, before individual programs of subjects, generally, indirectly, as a teaching tool in learning. The teacher's obligation for applying audio-visual tools and computer science equipment is also mentioned along with the task of the librarian to purchase multimedia sources of knowledge and form a multimedia school hub. Although as a term multimedia is not mentioned in the Nigeria educational curriculum.

The Drama Activities Educational Videos Programmes for primary two pupils as investigated in this study stimulates learning in two folds: firstly, multimedia in the classroom facilitates multimedia modes of presentations- Visual, Auditory and Kinaesthetics; thereby

making the pupils to learn with all their senses. Secondly, the inclusions of drama activities: Music, Animation/ Puppets, Simulation, Mime, Dance, Role – Play, Toys (objects) and Colours makes learning exciting and fun to the learners. These were evidence in the responses of the teachers and the pupils that participated in the experimental study.

The results of this study reveals that lower primary school pupils learn better and are motivated when multimedia is used as instructional material or teaching aids and they are motivated to learn when the teaching and learning process is edutainment in nature; as presented in the Drama Activities Educational Videos that are used in this study. With the Drama Activities Educational Videos programmes in the primary school classrooms; the long anticipated learner-centre-environment and learner-centred-teaching approach would be achieved. Perhaps a good numbers of the teachers sampled responded that "with the Drama Activities Educational Videos in the classroom the pupils don't have to look at him as the only source of knowledge always". The pupils sampled also responded that "with the Drama Activities Educational Videos, during the interactive sections their teachers allowed them express their opinions and perspectives on the subject matter under discussions," thereby making them active participants and co-creator of knowledge in the teaching and learning process.

5.3 Recommendations

Based on the observations of this study, the following recommendations are proffered.

1. The use of multimedia as teaching aids and multimedia delivery of knowledge would enable primary school pupils to learn through all the senses – Audio, Visual and Kinaesthetics. They should be encouraged in Nigerian Kindergarten and Primary Schools.

2. Government and Education Policy makers should strive to sponsor legislation geared towards integrating Multimedia gadgets as instructional materials within the primary schools'

curriculum. This will improve upon the existing traditional chalk-and-talk method of teaching in Nigerian Kindergarten and Primary Schools.

3. Curriculum experts should be trained on how to integrate existing learning contents into multimedia embedded with drama activities – music, animation/puppets, simulation, mime, dance, role – play, toys (objects) and colours in order to make learning exciting and fun for the kindergarten and primary school pupils.

4. Teachers at the kindergarten and primary school level should be trained on how to teach with multimedia gadgets in the classrooms. Most especially the multimedia that is integrated with drama activities as earlier outlined.

5. Kindergarten and Primary school authorities should create an awareness of this new teaching aid and its relevance to the pupils, their parents and the government. Pupils should also be informed and trained on how to learn with the integrated multimedia packages.

6. The Nigerian kindergarten and primary curricula need to be expanded and enriched to include materials with fresh perspectives. Each child/pupil needs to be given room to work according to his/her rhythm. The focus needs to shift from information transmission to real search and exploration through different media – be it articles/toys/films, etc.

7. Finally, measures should be put in place by the relevant authorities to supervise and monitor the compliance of teachers to this new method of teaching and learning in Nigerian Kindergarten and Primary schools, once it is approved and implemented.

5.4 Suggestions for Further Studies

As this area of study is still relatively fresh and in need of intensive scholarly exploration, future researches may consider the following. A study on the place and role of multimedia and edutainment classrooms in Nigerian Kindergarten and Primary schools can be undertaken. Such a study will raise awareness of the wider significance of media culture within the framework which we perceive multimedia – integrating drama activities – music,

animation/puppets, simulation, mime, dance, role–play, toys (objects) and colours and interaction (Interactive Learning Module) in the classrooms. Media culture components should be interpreted to include drama activities in future curricula for primary school; the best process through which it could be integrated and implemented into the curriculum should be examined.

A study of the role of the Curriculum Experts in the integration of the Multimedia in the classroom learning may also be explored. The import of multimedia gadgets as teaching aids and multimedia mode of content delivery and the significance of multimedia in class as agents for education are noteworthy aspects of such prospective studies. Future researches may further examine how Creative Drama/Children Theatre Programmes could be packaged into videos and used in the classroom for the purpose of teaching and learning. This study shall dwell on the significance of creative drama and children theatre to the kindergarten and primary school pupils' development and further detail how presenting it through multimedia in the classroom situation would further enhance pupils learning and development.

Finally, a study of the benefits of training and re-training the Nigerian kindergarten and primary school teachers on the use of multimedia in the classroom for effective and quality learning will be a veritable research work. This study will examine the present Nigerian Kindergarten and Primary School curricula and its method of knowledge delivery and proffer ways in which the teachers could be trained on how to use multimedia in the classroom to enhance the Nigerian Kindergarten and Primary School learning environment. This is to raise the awareness that training of teachers for multimedia usage in the classroom is essential to the education sector, if this programme is adopted for use in schools.

Works Cited

Agnew, P. William; Kellerman, A. Sally and Meyer, J. *Multimedia in the Classroom*, Boston: Allyn and Bacon, 1996.

Aiex, Nola Kortner. "Mass media use in the classroom." *ERIC Digest*, 1999. Available: http://www.digitaldivide.net/articles/view.php?ArticleID=372, 11/1/2015.

Alessi, M. Stephen and Trollip, R. Stanley. *Multimedia for Learning*. Massachusetts: Allyn and Bacon, 2001.

Ashley, Shear. "Implementing Educational Science Television in the Third Grade Classroom" An Unpublished Master of Science in Education Dissertation, Submitted to School of Education and Counseling Psychology Dominican University of California, June 2010.

Azmita, M. and Montgomery, R. "Friendship, transitive dialogues, and the development of scientific reasoning." *Social Development*, 2, 1993: 202-221.

Bandura, Albert., "Self-efficacy: toward a unifying theory of behavioral change." *Psychological Review*, **84**(2); 1977: 190-20.

Barnes, B., (ed). *The power of classroom TV: A marketing and advocacy document for the use of classroom television professionals.* 1997. Available: http://www.scetv.org/k12/classroom%20tv.htm, 11/1/2015.

Barron, L. *Enhancing learning in at-risk students: Applications of video Technology.* New York: Bantam Books, 1989.

Blatner, Adam. "Role playing in Education," 2002. On-line, Retrieved on 1/8/2013 www.blatner.com/adam/pdntbk/rlplayedu.htm.

Bonwell, C. Charles. and Eison, A. James. *Active learning: Creating excitement in the classroom.* New York: Bantam Books, 1991.

Bolton, Gavin. *New Perspectives on Classroom Drama*. Hemel, Hempstead: Simon Shuster, 1992.

Brad, Hansen. *The Dictionary of Multimedia*. London, Chicago: Fitzroy Dearborn Publishers, 1999.

Bransford, D. John, Brown, L. Ann and Cocking, R. Rodney (Eds.). *How People Learn: Brain, Mind, Experience and School* (Expanded edition). Washington, DC: National Academy Press, 2000.

Brown, J. William, and Meeks, D. Jeffery. "Experimenting with the entertainment-education strategy in film and video," *Journal of Film and Video, 49*(4); 1997, 30–43.

Brualdi, C. Amy. "Multiple intelligences: Gardner's theory." *ERIC Digest*, 1996. Available: http://www.digitaldivide.net/articles/view.php?ArticleID=372, 11/1/2015.

Byrnes, P. James, and Torney-Purta, Judith. "Naive Theories and Decision Making as Part of Higher Order Thinking in Social Studies. "*Theory and Research in Social Education* 23(3): 1995; 260–77.

Campbell, L, Campbell, B and Dickenson, D. *Teaching and learning through multiple intelligences*. Boston: Pearson Education, 2004.

Chauhan, Vani. "Drama techniques for teaching English." *The Internet TESL Journal, 10*(10), 2004: 36-48.

Chen, M., and Hodder, L. *A Research Overview of FASE Productions' TV Series on Science, Mathematics, and Technology Education*. Available online at http://ts.mivu.org/default.asp?show=article&id=1034,1997. Accessed on 15th November, 2015.

Clark, M. Carolyn., "Transformational Learning." Merriam, B. Sharan (Ed.). *An Update on Adult Learning Theory*. San Francisco: Jossey-Bass, 1993; 47-56.

Clark, R., Nguyen, F. and Sweller, J. *Efficiency in Learning*. San Francisco: Pfeiffer, 2006.

Cohen, S. Alan. "Instructional alignment: Searching for a magic bullet," *Educational Researcher 16*(8), 1987; 16– 20.

Cobb, P. "Mathematics Learning and Small-Group Interaction: Four Case Studies," (eds), Cobb, P. and Bauersfeld, H., *The Emergence of Mathematical Meaning: Interaction in Classroom Cultures*. Hillsdale, NJ: Erlbaum, 1995; 1–16.

Collins, J., Hammond, M. and Wellington, J. *Teaching and Learning with Multimedia*. London: Routledge, 1997.

Corporation for Public Broadcasting. *Television goes to school: The impact of video on student learning in formal education.* 2004. Available: http://www.cpb.org/stations/reports/tvgoestoschool/ 11/1/2015.

Cuban, Larry. *How Teachers Taught: Constancy and Change in American Classrooms, 1880-1990.* New York: Teachers College Press, 1993.

Denning, David. *Video in theory and practice: Issues for classroom use and teacher video evaluation,* 2014. Available: http://www.ebiomedia.com/downloads/VidPM.pdf. Accessed 19/11/2015.

Donovan, M. Suzanne., Bransford, D. John, & Pelegrino, W. James (Eds.) *How People Learn: Bridging Research and Practice.* Washington DC: National Academy Press, 2009.

Dougil, John, *Drama Activities for Language Learner*. London: Macmillan Publishers Ltd, 1987.

Fabos, B. *Media in the classroom: An alternative history.* 2001. Accessed on 13/12/2016. Available: http://www.ebiomedia.com/downloads/VidPM.pdf

Fisch, M. Shalom. "Children's learning from television." *TelevIZIon, 18,* pp. 10-14; 2005.

Freebody, Peter. *Qualitative research in education: interaction and practice*. London: Sage, 2003.

Foundation for Advancements in Science and Education (FASE). *Classroom Television: A Useful Resource for Mathematics and Science Education; Evaluation of the Eddie Files*. Los Angeles: Crown Press,1997.

Gadt-Johnson, C. and Price, G. "Comparing students with high and low preferences for tactile learning." *Education*, 120(3) ; 2000, 581-585.

Gardner, Howard. *Multiple Intelligences, New Horizons.* New York: Basic Books, 2006.

Gardner, G. Donald; Cummings, L., Dunham, B. Randall, and Pierce, L. Jon "Single–item versus multiple–item measurement scales: an empirical comparison," *Educ. Psychol. Meas*. 58; 1998, 898–915.

Glasersfeld, E., *Cognition, construction of knowledge, and teaching*. London: Synthese, 1989.

Halstead, Valerie. "The Introduction of the National Curriculum and Assessment in England," (ed.) Theodor, Sanders. *Current Changes and Challenges in European Teacher Education*, London: Routledge; 1994, 383-399.

Hampe, B. "Four ways video can help—and three ways it can't. *e-School news*, 2006. Available: http://www.eschoolnews.com/news/PFshowstory.cfm?ArticleID=1354. Accessed 16/11/2015.

Hannaford, C. *Smart moves: why learning is not all in your head*. Atlanta, GA: Great Ocean, 1995.

Heatcote, D., *Collected writings on education and drama*. Johnson, L and O'Neill, C. (ed) Illinios: Northwestern University Press, 1985.

Hobbs, R. "Non-optimal uses of video in the Classroom," *Learning, Media & Technology, 31(1)*; 2006, 35-50.

Idogho, J. Agofure. "Drama in Education for Sustainable Children Development*", AMA Journal of Theatre and Cultural Studies*, Vol. 8, No. 1. (Print and Online Version), 2013: 120- 132.

Illeris, Knud, *The three dimensions of learning*, Malabar, Fla: Krieger Pub Co, 2004.

James, M. Marshall, *Learning with Technology: Evidence that Technology can and does support Learning*. 2015, Avalable: http://www.adobe.com/designcenter/thinktank/valuemedia/The_Value_of_Multimedia.pdf. Accessed on 16th October, 2015.

Jensen, E. *Teaching with the brain in mind.* Alexandria, VA: Association for Supervision and Curriculum Development, 1998.

Jerram, P. and Gosney, M. *Multimedia Power Tools*. New York, Toronto, London, Verbum, 1995.

Jones, Ken. *Simulations in Language Teaching*. Cambridge: Cambridge University Press, 1982.

Kozma, B. Robert "Learning with media." *Review of Educational Research. 61(2),*179-212; 1991.

Landy, J. Robert. "The Dramatic Basis of Role Theory." *The Arts in Psychotherapy*, 17, 223-230, 1991.

Latchem, C., Williamson, J. and Henderson-Lancett, L. Interactive Multimedia: Practice and Promise. London: Kogan Page, 1993.

Le Doux, E. Joseph. *The emotional brain: mysterious underpinnings of emotional life*. New York: Simon& Schuster, 1998.

Leonard, David. *Learning theories, A to Z.* Westport, Conn: Oryx Press, 2002.

Lesh, R., and Lamon, J. Susan. *Assessment of Authentic Performance in School Mathematics.* Washington, DC: AAAS Press, 1992.

Lin, C. *Literacy Instruction through Communicative and Visual Arts*. Boston: Allyn and Bacon; 2003.

Linebarger, D. Luze, Kosanic, Z. Anjelika, Greenwood, R. Charles and Doku, N. "Effects of viewing the television program *Between the Lions* on the emergent literacy skills of young children," *Journal of Educational Psychology, 96*; 2004, 297-308.

Livingstone, D., (Ed.), *Critical Pedagogy and Cultural Power*, London: Macmillan, 1987.

Lobo, Y. and Winsler, A. *The Effects of a Creative Dance and Movement program on the Social Competence of Head Start Preschoolers.* USA: Blackwood Publishing, 2006.

Lockard, James and Abrams, D. Peter. *Computers for Twenty-first Century Educators*. New York: Longman, 2001.

Maddux, C., Johnson, D., and Willis, J. *Educational Computer: Learning with Tomorrow's Technologies*. Boston: Allyn and Bacon; 2001.

McCaslin, Nellie. *Creative Drama in the Classroom & Beyond*. Studio City, CA: Players Press,1998.

Majaron, E. "Art as a pathway to the Child," Keynote presentation to the 11th Biennial Conference of the European Affective Education Network (EAEN), University of Ljubljana, Slovenia, 26-30 June 2011. Retrieved from www.youandmepuppets.com, 06/06/2015.

Maree, J. and Fernandes, M. "The impact of emotional intelligence on solution-focused therapy with an adolescent," *Early Child Development and Care*, 173(5); 2003:449-507.

Marshall, M. James "Learning with technology: Evidence that technology can, and does, support learning." *Educational Forum,* 68; 2004: 140-153.

Martinson, L. David. "Media literacy education: No longer a curriculum option." *The Educational Forum, 68,* 154-160; 2004.

Mayer, E. Richard. *Multimedia Learning*. New York: Cambridge University Press, 2007.

Mayer, E. Richard. and Moreno, R. "A split-attention effect in multimedia learning: Evidence for dual processing systems in working memory" *Journal of Educational Psychology*, 90; 1998: 312-320.

Mezirow, Jack, *Leaning as Transformation: Critical Perspective on Theory in Progress*. San Francisco: Jossy-Bass, 2000.

Monke, Lowell. "The Human Touch" Available at: http://educationnext.org/thehumantouch/, 2004. Accessed on 15th November, 2015.

Moore, M. David Burton, K. John and Myers, J. Robert. "Multiple-channel Communication: The theoretical and research foundations of multimedia", Jonassen, H. David. (Ed.), *Handbook of Research on Educational Communications and Technology* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates: 2004, 981-1005.

Munro, Alice. *An Introduction to Research in the Arts*. Pretoria: Tshwane University of Technology Press, 2005.

Nederveen Pieterse, J., *Emancipations, Modern and Postmodern*. London: Sage, 1992.

Neelly, L. "Developmentally appropriate music practice: Children learn what they live". *Young Children* 56 (3), 2001: 32–37.

Norton, P. & Wiburg, K. *Teaching with Technology: Designing Opportunities for Learning*. Canada: Thompson-Wadsworth, 2003.

Obadiegwu, Cyril Chiduo. "Participatory Learning and Student Empowerment in the Classroom" in Africa Research Review: An International Multidisciplinary Journal, Ethiopia, Vol. 6 (1), No. 24, 2012, (299-310).

Ogunmilade, C. A. *Media in Education*. Ile-Ife: University of Ife Press, 1984.

O'Hare, Judith. "Educating the Child through Puppets," 2004. Retrieved from www.youandmepuppets.com, 6/6/2015.

O'Malley, J. Michael and Pierce, L. *Authentic assessment for English language learners: Practical approaches for teachers.* New York: Longman, 1996.

Palmer, L. Edward and Fisch, M. Shalom "The beginnings of *Sesame Street* Research, (Eds.), Fisch, M. Shalom and Truglio, T. Rosemary. *"G" is for growing: Thirty years of research on children and Sesame Street* Hillsdale, NJ: Erlbaum, 2001: 3–23.

Palmer, L. Edward and Young, M. Brian. (Eds) *The Faces of Televisual Media*. New Jersey, London: Lawrence Erlbaum Associates, 2003.

Pammenter, David. "Devising for TIE", *Learning through Theatre,* ed. Tony Jackson, (2nd Edition), London: Routledge, 1997; 53-70.

Petrina, Stephen. *Advanced Teaching Methods for the Technology Classroom*. Melbourne: Information Science Publishing, 2006.

Pinnington, H. Ashly. *Using Video in Training and Education.* Belkshire: Mc Graw-Hill, 1991.

Pitcher, Evelyn. Goodenough; Feinburg, G. Sylva and Alexander, D. *Helping Young Children Learn*. Toronto: Charles E. Merill Publishing Company, 1989.

Pruitt, J. Crayton. "The next decade of educational media." *Digital Divide Network.* May 5, 2005. Available: http://www.digitaldivide.net/articles/view.php?ArticleID=372, 11/1/2015.

Pugh McCutchen, Brenda. *Teaching Dance as Art in Education*. USA: Sheridan Books, 2006.

Ritchhart, Ron. and Perkins, N. David. "Making thinking visible", *Educational Leadership*, 65 (5); 2008, 57–61.

Robin, R. Bernard. "Digital storytelling: a powerful technology tool for the 21st century classroom." *Theory into Practice***. 47** (3); 2008, 220–228.

Royka, Judith Gray. "Overcoming the fear of using drama in English language teaching." *The Internet TESL Journal, (8)*6, 2002: 29- 42.

Rose, Colin. *Accelerated learning*, Topaz: Great Missenden, 1985.

Russell Taylor, John. *A Dictionary of the Theatre*, Harmondsworth: Penguin, 1970.

Seels, Barbara; Berry, H. Louis; Fullerton, Karen; and Horn , J. Laura. "Research on learning from television," (Ed.), D.H. Jonassen. *Handbook of research for educational communications and technology* New York: Macmillan; 1996, 665–692.

Schnotz, Wolfgang. "An integrated model of text and picture comprehension," (Ed.) Mayer, E. Richard. *The Cambridge Handbook of Multimedia Learning.* New York: Cambridge University Press. 2005.

Silverman, Fran. "Learning styles." *District Administration*, 41, 70-79; 1st September, 2006.

Simkins M., Cole K., Tavlin F., Mean, B. *Increasing Students Learning Through Multimedia Projects.* Alexandria, VA: Association for Supervision and Curriculum Development, 2002.

Simons, Robert –John; Van der Linden, Jos. and Duffy, Tom. *New Learning.* London: Kluwer Academic Publishers, 2000.

Skolnik, R., & Smith, C. Educational technology: Redefining the American classroom. *Network News and Views, 12 (3)*: 1993, February, 79-83.

Sorden, D. Stephen "A cognitive approach to instructional design for multimedia learning", *Information Science Journal,* 8; 2005: 263-279.

Sun, Ping-Yun. "Using drama and theater to promote literacy development: Some basic classroom applications." *Early Childhood Today, 17*(8), 24, 2003: 50-62.

Stipek, Deborah. *Motivation to learn*. Boston, Allan and Bacon, 2002.

Svinicki, D. Marilla. "New directions in learning and motivations". *New Directions for Teaching and Learning, 80* (Winter), 1999; 5-27.

Sweller, John. "Implications of cognitive load theory for multimedia learning". ," (Ed.) Mayer, E. Richard. *The Cambridge Handbook of Multimedia Learning.* New York: Cambridge University Press. 2005.

Teele, Sue. *Rainbows of Intelligence*. Thousand Oaks, Calif: Corwin Press, 2000.

Toye, NigeI and Francis, Prendiville. *Drama and traditional story for the early years,* London: Routledge, 2000.

Tufte, R. Edward. *The Cognitive Style of PowerPoint*. Cheshire, CT: Graphics, 2003.

Tway, Linda. *Multimedia in Action*. Boston: Academic Press, 1995.

Viktor, Lowenfeld and Brittain, W. Lambert. *Creative and Mental Growth*. (Eight edition), New York; Macmillan Publishing co., 1987.

Vygotsky, S. Lev. *Mind in society*. Cambridge, MA: Harvard University Press, 1978.

Wagner, Betty Jane. *Dorothy Heathcote, Drama as a Learning Medium*. Washington, D.C.: National Education Association, 1976.

Wertheimer, Max., "Laws of organization in perceptual forms," Retrieved on the 17th January, 2015; from http://psy.ed.asu.edu/~classics/Wertheimer/Forms/forms.htm.

Wessels, Charlyn, *Drama,* Oxford: Oxford University Press, 1987.

Williams, K. Brian; Sawyer, C. Stacey and Hutchinson. E. Sarah. *Using Information Technology*. Chicago: Irwin, 1995.

Woolfolk, E. Anita. *Educational Psychology*. London: Allan and Bacon.

Yin, K. Robert. *Case study research: Design and method* (5th ed.), Thousand Oaks, CA: Sage, 2009.

APPENDIX I

DEPARTMENT OF THEATRE AND FILM STUDIESNNAMDI AZIKIWE UNIVERSITY, AWKA
PMB 5025, AWKA, ANAMBRA STATE, NIGERIA

External Memorandum

To: The Head Teacher, St Peter's Nursery and Primary School, Akure Ondo State. **Date:** 13th April, 2016.	**From:** IDOGHO Joseph Agofure (Reg No. 2012107001F). Department of Theatre and Film Studies Nnamdi Azikiwe University, Awka PMB 5025, Awka, Anambra State, Nigeria.

APPLICATION TO USE YOUR SCHOOL FOR EDUCATIONAL DRAMA ACTIVITIES VIDEO AND TELEVISION INTERVENTION PROGRAMME FOR CLASSROOM ENVIRONMENT EXPERIMENT

I wish to apply for the above subject matter in your Primary School.

This "**Educational Drama Activities Video and Television Intervention Programme for Classroom Environment"** sets out to teach the Primary Two B pupils of your School the scheme of work as specified in the National Primary School Curriculum using Educational Video and Television in the classroom. Thereafter measure the learning outcome by examining both Primary Two B pupils and Primary Two B pupils who were taught using the traditional chalk-and-talk method. This study shall use the following Multimedia Mediated Activities; *Nice Kids English Teaching*, *Love Kids English Teaching* and *Children Mathematics Learning Collections* (Videos) as a means of experimenting the integration of the three learning modalities (auditory, visual, and kinesthetics) and student-centred learning in teaching the curriculum content, as practiced in contemporary education.

This study shall integrate an Interactive Learning Module (ILM) that would enable both the classroom teacher and the pupils to interact in the learning process; for the period of Eight Weeks, in this 3rd Term of 2015/2016 Academic Session. Thereafter, the learning outcome would be measure using test for both the treatment group and the control group.

This study basically aims at experimenting with "**Educational Video and Television Intervention Programme for Classroom Environment"** as an alternative to the traditional Chalk-and-Talk method of teaching. The effectiveness or inefficiency of this experiment will be of immense value to this study and as well to the Nigeria education in general if successful.

I shall be grateful if my application is given due consideration.

Yours Faithfully,

Joseph Agofure IDOGHO.

APPENDIX II

INSTRUMENT VALIDATION FORM

RESEARCH TOPIC: Learning for Transformation: The Impact of Multimedia Drama Activities in the Classroom Environment

"A Doctor of Philosophy Ph.D Dissertation"
In the Department of Theatre and Film Studies, Nnamdi Azikiwe University Awka
By
Idogho, Joseph Agofure (REG NO.: 2012107001F)

Purpose of the Study: This Study aims at evaluating the impact of Multimedia Drama Activities using; (Nice Kids- English Teaching by Mrs Francisca Dike: An Educational Drama Videos) that contains **Music / Songs, Mime, Simulation, Role-Play, Poems, Graphics, and Animation** to teach Lower Primary School- Primary 1, 2 & 3 Curriculum / Scheme of Work in the Nigeria Classroom Environment.

To this Extent the Expert vetting this instrument, having watch the (Nice Kids- English Teaching by Mrs Francisca Dike: An Educational Drama Videos); is to ascertained whether or not the aforementioned instrument is valid for the purpose which it is designed; by ticking the appropriate colon in the Table below:

S/n	ITEMS	Yes	No
1	The learning activities captured in these Educational Drama Videos covers the Primary 2 Curriculum / Scheme of Work of the Nigeria Classroom Environment?		
2	This teaching method / aids are appropriate for the Primary 2 Pupils in Nigeria Schools?		
3	All the Dramatic activities that could enhance teaching and learning are presented in these Educational Drama Videos?		
4	Using these Educational Drama Videos and integrating the Interactive Learning Module (Interactive Learning) would enhance teaching and learning at this lower Primary School level?		
5	This teaching method / aids would make children enjoy learning more than the Traditional Method?		
6	This teaching method / aids would enhance children Pronunciation / Speaking Skills?		
7	This teaching method / aids would enhance children Listening Skills?		
8	This teaching method / aids would enhance children Reading / Writing Skills?		
9	This teaching method / aids would enhance children Mathematics / Arithmetics Skills?		
10	This teaching method / aids would instill confidence and vibrancy in the pupils?		

Other Comments by the Vetting Expert: .....

.....
.....

Name of Vetting Expert:

Rank / Area of Specialty:

Department:

Institution:

Signature & Date:

APPENDIX III

Sample of the Pre-Test and Post-Test used in this Study
Arithmetics Section

Write the follow Numbers in Roman Figures

Examples: (5 – V); (8 – VIII); (19 – XIX)

1.) 29 =

2.) 47 =

3.) 57 =

4.) 69 =

5.) 99 =

From Question 6 – 10 is Additions (+) Drill.

6.) 15 + 63 =

7.) 23 + 39 =

8.) 18 + 37 =

9.) 12 + 42 =

10.) 35 + 26 =

From Question 11- 14 is the identification of Mathematics Symbols.

Match the appropriate symbols against the words below

11.) Equals: .....

12.) Subtractions: .....

13.) Multiplication: .....

14.) Subtraction: .....

15.) Addition: .....

From Questions 16 – 20 is the identification of shapes

Draw the appropriate shape in front of the words below:

16.) Triangle:

17.) Rectangle:

18.) Square:

19.) Circle:

20.) Cone:

From Questions (21- 24) is Multiplication (x) Drill
21.) 3 x 4 =
22.) 4 x 8 =
23.) 5 x 7 =
24.) 6 x 10 =

From Questions (25- 27) is Division (÷) Drill
25.) 4 ÷ 20 =
26.) 5 ÷ 30 =
27.) 6 ÷ 42 =

From Questions (28- 30) is Subtraction (-) Drill
28.) 47- 23 =
29.) 63- 39 =
30.) 51- 19 =
Note: Pupils were also tested to read and write in numbers; Numbers from 200 - 400

English Language Section

Identify the **Vowels Sound /Alphabet** we have in English language and use each alphabet to form a word. Example; B – for Ball
1.)
2.)
3.)
4.)
5.)

Identify five (5) **Consonant Sound /Alphabet** we have in English language and use each alphabet to form a word, with the exception of these examples. Example; B – for Ball; C- for Cat etc
6.)
7.)
8.)
9.)
10.)

Identify five (5) **items found at School** and make a Sentence with each item listed.
11.)
12.)
13.)
14.)
15.)

Identify five (5) **items found at Home** and make a Sentence with each item listed.

16.)
17.)
18.)
19.)
20.)

From Questions (20- 25) Singular and Plurals

	Singular	**Plural**
21.	Ox	
22.	Thief	
23.	Man	
24.	Box	
25.	Ball	

From Questions (26- 30) Words and Opposite

	Words	**Opposite**
26.	Tall	
27.	Man	
28.	Old	
29.	Small	
30.	Girl	

Words Formation; **Three Letters and Four Letters Words,** Please do not use any words that are already used in this Question Papers.

	Three Letters Words		**Four Letters Words**
31.		36.	
32.		37.	
33.		38.	
34.		39.	
35.		40.	

Note: Pupils were also tested to Read and Write the English Language Alphabet Properly.

States and Capitals

	States	**Capitals**		**States**	**Capitals**
1.	Abia		20.	Kastina	
2.	Adamawa		21.	Kebbi	
3.	Akwa Ibom		22.	Kogi	
4.	Anambra		23.	Kwara	
5.	Bauchi		24.	Lagos	
6.	Bayelsa		25.	Nasarawa	
7.	Benue		26.	Niger	
8.	Borno		27.	Ogun	
9.	Cross River		28.	Ondo	

10.	Delta		29.	Osun	
11.	Ebonyi		30.	Oyo	
12.	Edo		31.	Plateau	
13.	Ekiti		32.	Rivers	
14.	Enugu		33.	Sokoto	
15.	Gombe		34.	Taraba	
16.	Imo		35.	Yobe	
17.	Jigawa		36.	Zamfara	
18.	Kaduna			F. C.T.	
19	Kano				

Choose the appropriate Capital from the box below to fill in the Spaces of the State above:

Port-Harcourt	Jos	Ilorin	Katsina	Bauchi
Ibadan	Akure	Dutse	Yola	Yenegoa
Sokoto	Minna	Lokoja	Benin City	Calabar
Abuja	Oshogbo	Kaduna	Maiduguri	Uyo
Gusau	Lafia	Birnin Kebbi	Awka	Owerri
Damaturu	Enugu	Kano	Makurdi	
Jalingo	Ikeja	Umuahia	Abakaliki	
Abeokuta	Gombe	Ado-Ekiti	Asaba	

APPENDIX IV

Department of Theatre and Film Studies, Nnamdi Azikiwe University, Awka. PMB 5025, Awka, Anambra State, Nigeria

QUESTIONNAIRE FOR TEACHERS

TEACHERS' PERCEPTION ON "Drama Activities Educational Video and Television Intervention Programme for Classroom Environment"

Dear Teachers,
This Questionnaire is a part of an ongoing research which is being conducted under the auspices of the above institution; about pupil's perception on "**Drama Activities Educational Video and Television Intervention Programme for Classroom Environment"**.

Your co-operation is very essential in filling this Questionnaire. Your responses shall be treated as private and confidential.
Thank you.

Mr **IDOGHO,** Joseph Agofure (Reg No. 2012107001F).

INSTRUCTIONS
This questionnaire consists of three sections: A, B and C sections. Please tick (√) in the box (es) provided in section A and tick appropriately in section B. Please feel free to express your opinion in section C. This research is for academic purpose only.

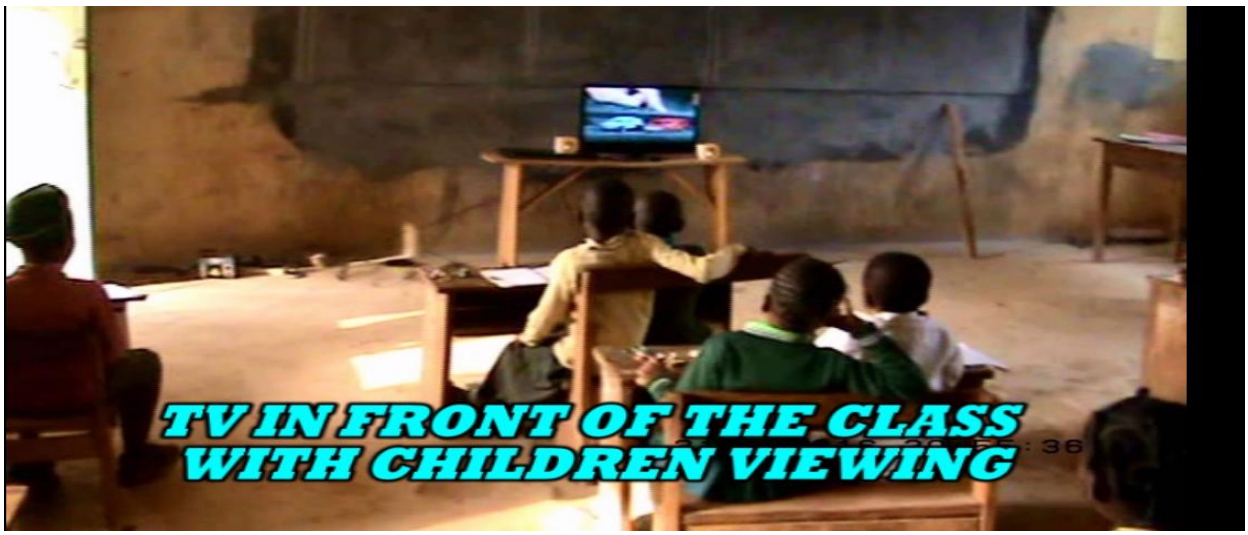
SECTION A
Your name is not needed please.
1. **Sex:** Male [ ], Female [ ]
2. Highest Educational Qualifications: NCE [ ], B.A [ ], B.Sc [ ], B.Ed. [ ], PGDE [ ], M.A [ ], MSc. [ ] M. Ed. [ ] Ph.D [ ]

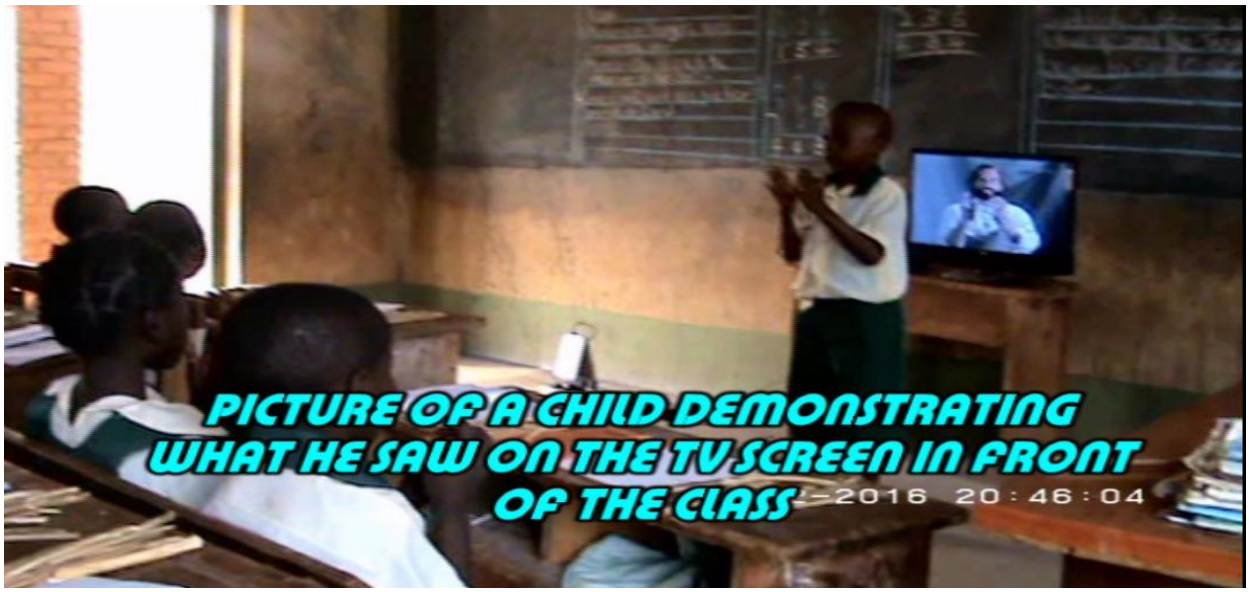
SECTION B: Please tick (√) appropriately the any colon in each of the questions below as it captures your interest most.

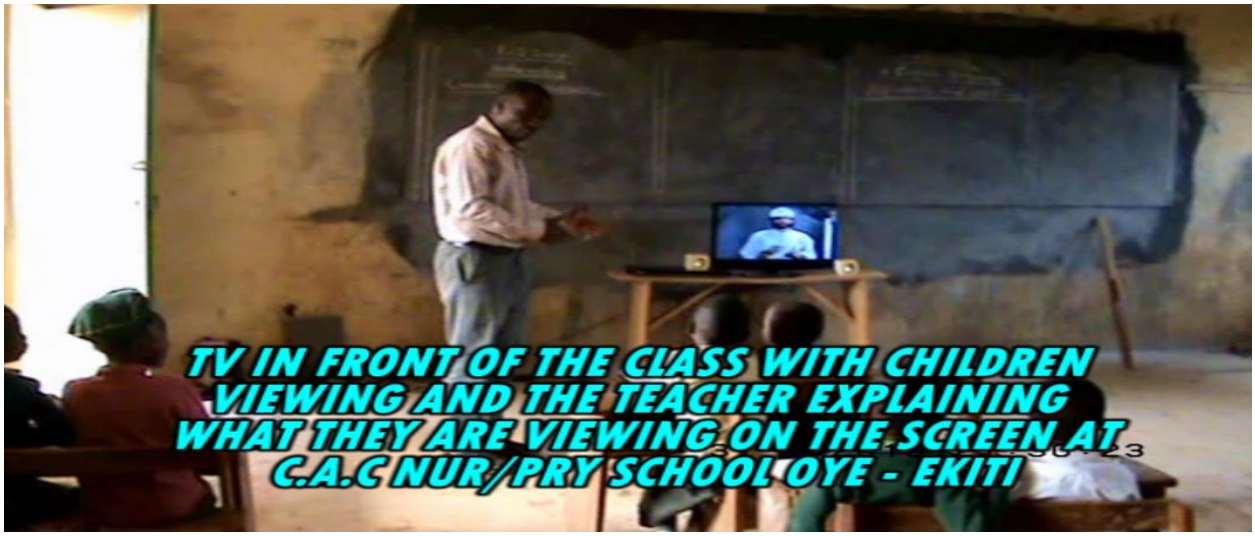
	Interpretation of Responses : **S/A** = Strongly Agreed: **A** = Agreed: **U**= Undecided: **D** = Disagreed: **S/D**: Strongly					
S/n...	ITEMS	S/A	A	U	D	S/D
1	**The pupils are more enthusiastic to learn with the Video &TV (ILM) than the Chalk-&-Talk Method**					
2	**With Video & TV, the pupil's actively participate in their own learning process.**					
3	**Lectures of the Video and TV Interactive Learning Module (ILM) were easier to deliver.**					
4	**Information presented through the Video and TV modules were clear and concise.**					
5	**I was able to maintain the pupil's attention level when I used Videos and TV as Classroom Teaching Aids**.					
6	**With Video & TV, teachers represent their educational content using a combination of media instead of just text only.**					
7	**With Video & TV, the Educational content become more interactive and media-rich.**					
8	**With Video & TV, the pupil's passively absorbed the information from the media & their teachers.**					
9	**With Video & TV in the classroom, the students are no longer passive learners.**					
10	**The Video & TV (ILM) classes were easier to manage than the traditional Chalk-&-Talk classroom.**					
11	**I delivered more with media- Video & TV (ILM) than I would with the traditional Chalk-&-Talk method.**					
12	**With Video & TV, the teaching and learning environment is enhanced (pupil's-centred-learning class).**					
13	**The use of media- Video & TV (ILM) are appropriate at the lower Primary School.**					
14	**I find the quality of presenting my lectures with Videos & TV (ILM) sufficient.**					
15	**Prefer media technology- Video & TV (ILM) based Classroom teaching.**					
16	**I would like the Video & TV Learning to be a permanent Teaching & learning method of my class.**					
17	**The Video & TV (ILM) Class seems to be a better teaching and learning method than the Chalk-&-Talk Method.**					
18	**It seems the Video & TV Class- Interactive Learning Module (ILM) format would be easy to get used to.**					
19	**In general, I would like to try out new technologies (e.g., computers, the Internet, interactive television etc).**					
20	**I would recommend Video & TV Class- Interactive Learning Module (ILM) across all levels of education.**					

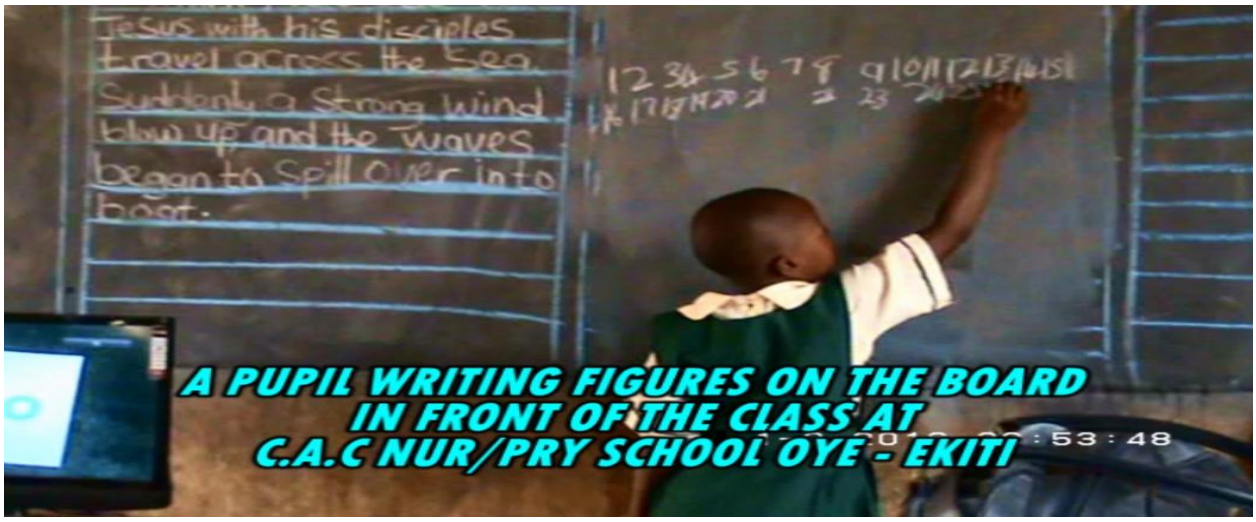
SECTION C: Please feel free to comment on how you feel about this programme- (The Possible Challenges).....
.....
.....

APPENDIX IV
Photo Album of Practical Workshop

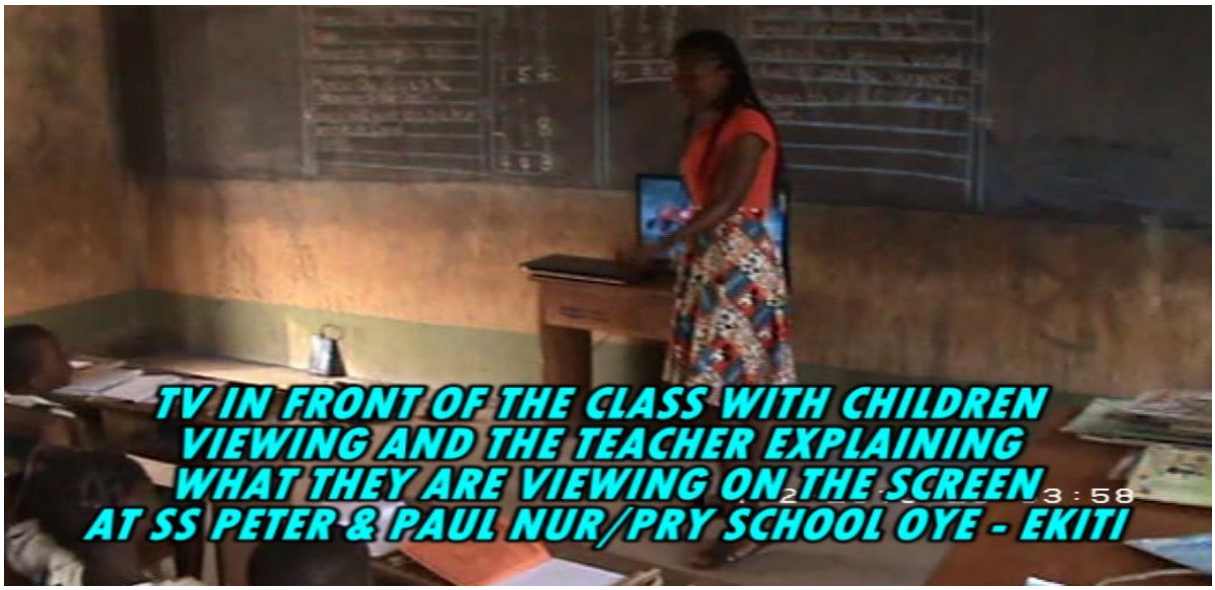




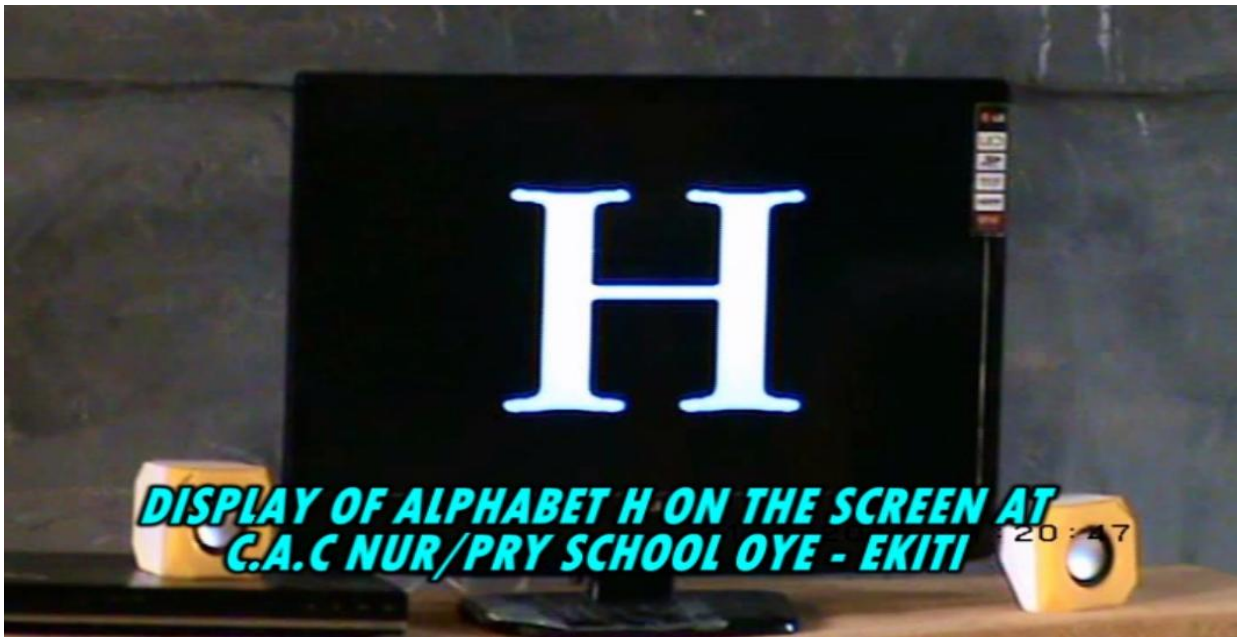



Jesus with his disciples
travel across the Sea.
Suddenly a strong wind
blow up and the waves
began to spill over into
boat.
A PUPIL WRITING FIGURES ON THE BOARD
IN FRONT OF THE CLASS AT
C.A.C NUR/PRY SCHOOL OYE - EKITI

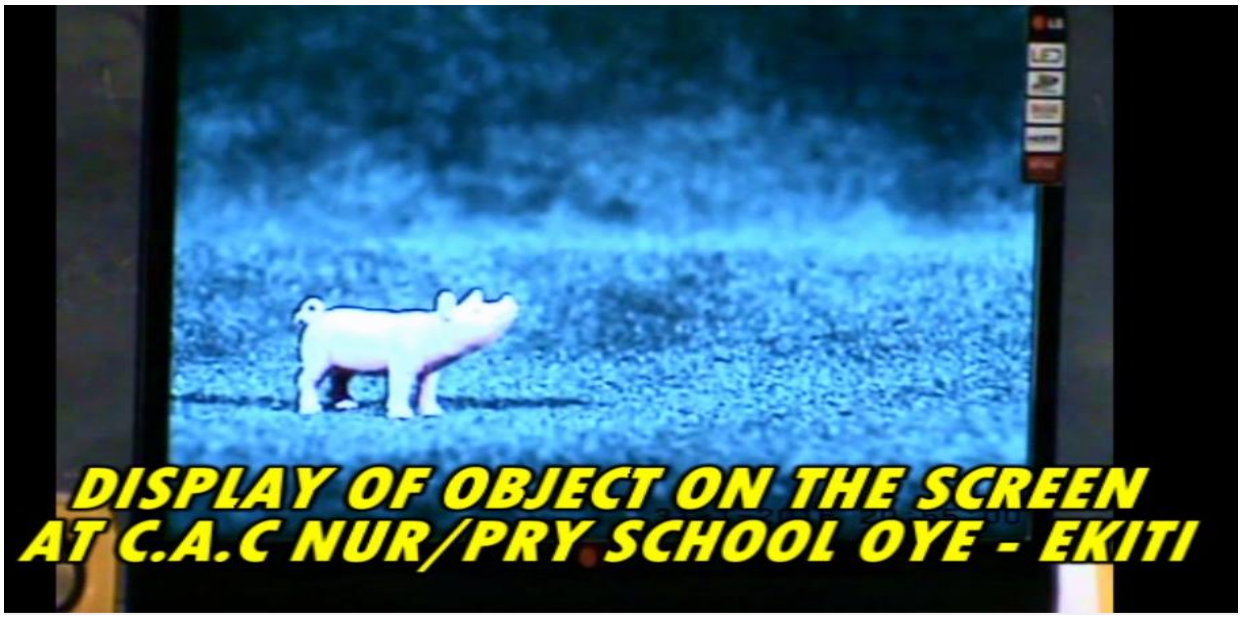

A PUPIL STANDING UP TO ANSWER QUESTION
IN FRONT OF THE CLASS AT
C.A.C NUR/PRY SCHOOL OYE - EKITI

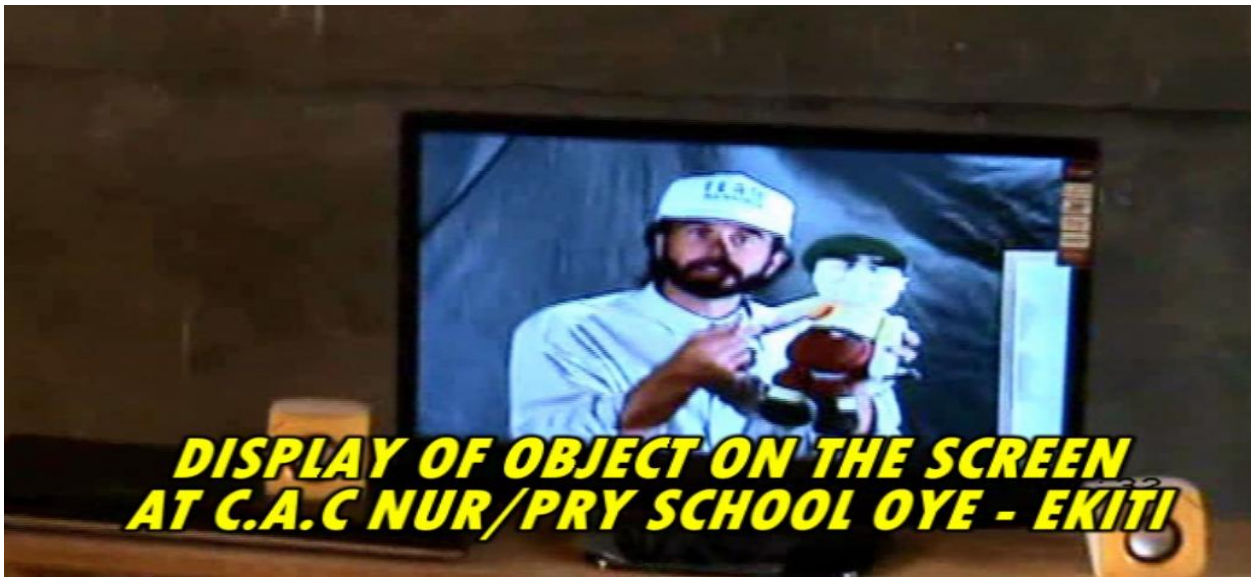

TV IN FRONT OF THE CLASS WITH CHILDREN
VIEWING AND THE TEACHER EXPLAINING
WHAT THEY ARE VIEWING ON THE SCREEN
AT SS PETER & PAUL NUR/PRY SCHOOL OYE - EKITI


A PUPIL DESMONTRATING WHAT HE SAW
ON THE SCREEN AT S.S PETER & PAUL NUR/PRY
SCHOOL OYE - EKITI


H
DISPLAY OF ALPHABET H ON THE SCREEN AT
C.A.C NUR/PRY SCHOOL OYE - EKITI

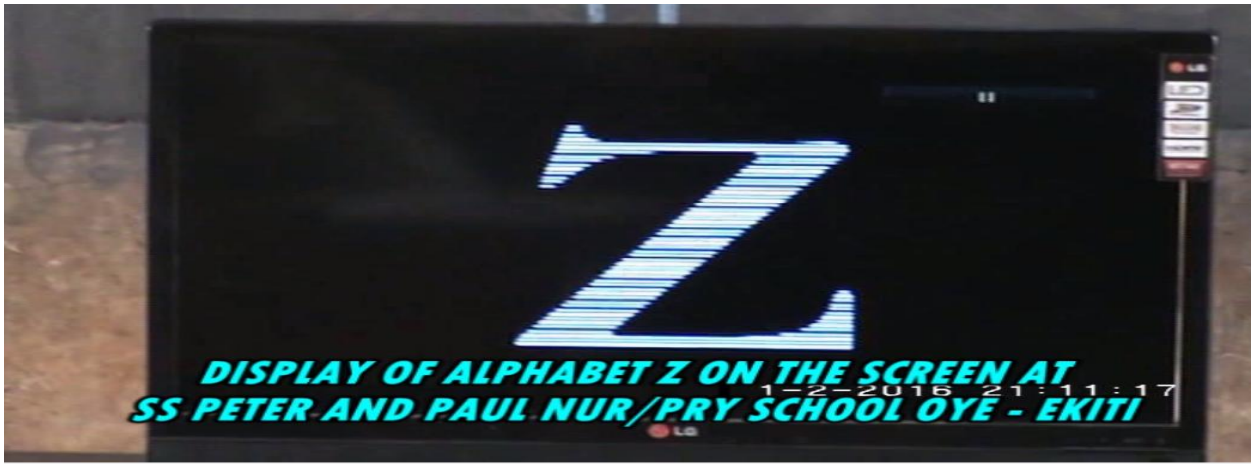

A PUPIL DESMONTRATING WHAT HE SAW
ON THE SCREEN AT S.S PETER & PAUL NUR/PRY
SCHOOL OYE - EKITI

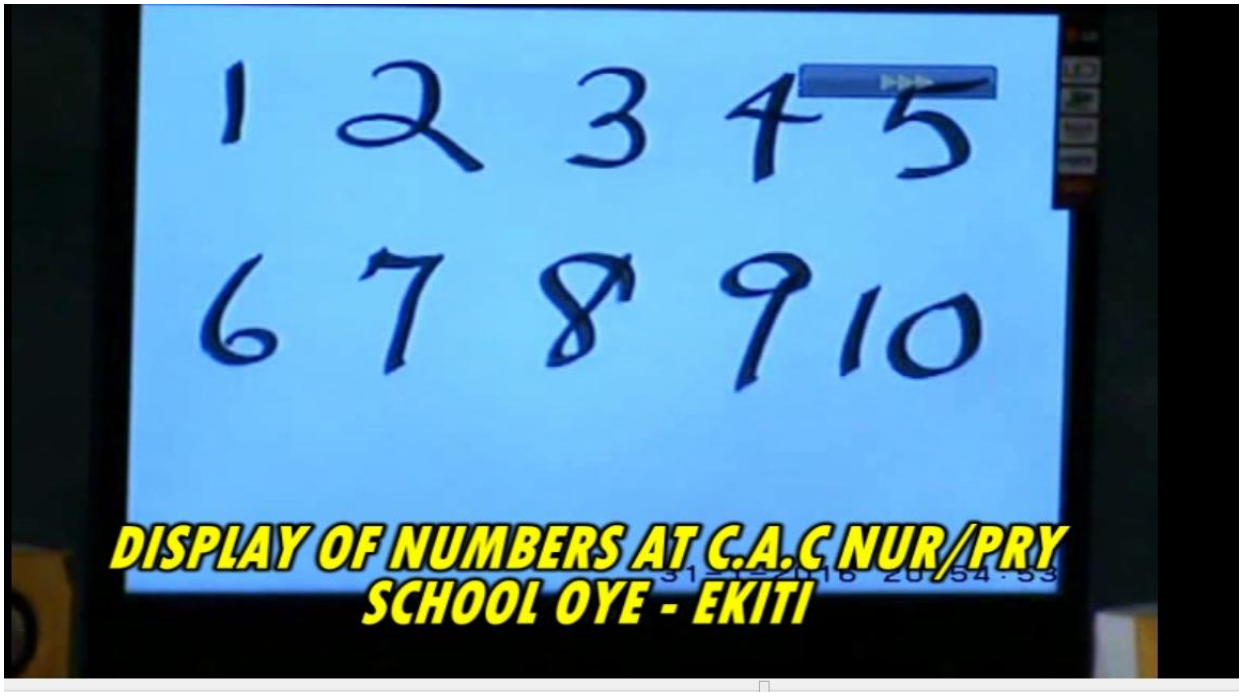

DISPLAY OF OBJECT ON THE SCREEN
AT C.A.C NUR/PRY SCHOOL OYE - EKITI

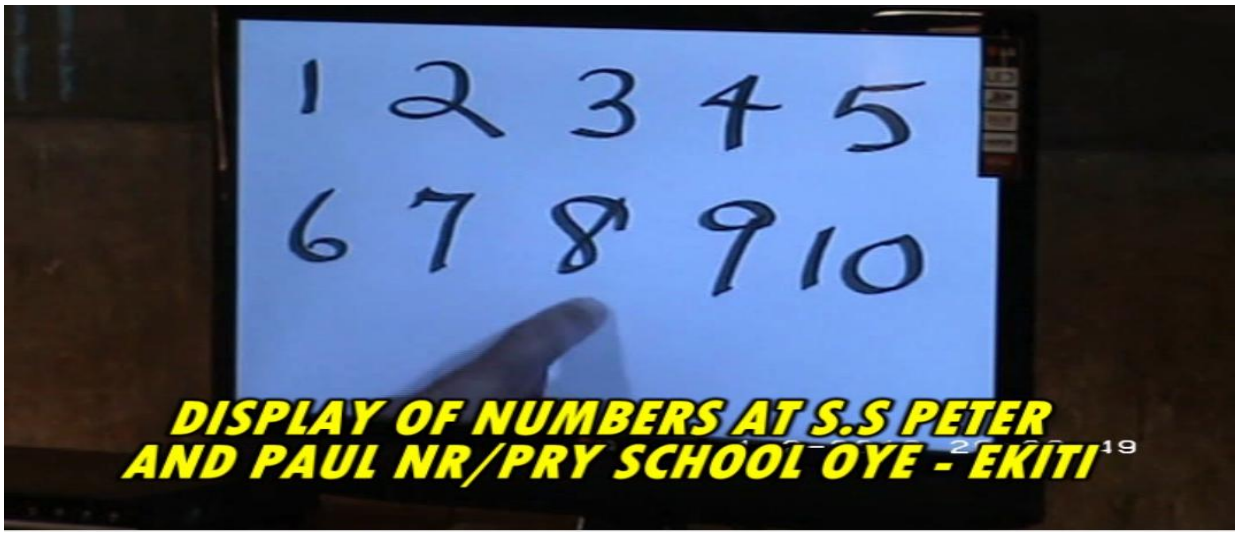

DISPLAY OF OBJECT ON THE SCREEN
AT C.A.C NUR/PRY SCHOOL OYE - EKITI

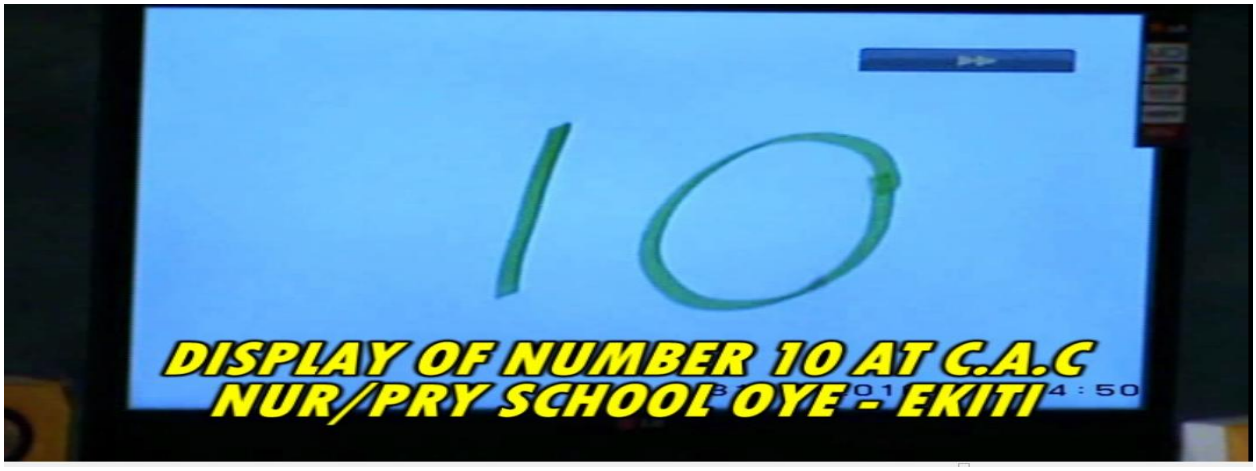

DISPLAY OF OBJECT ON THE SCREEN
AT S.S PETER NUR/PRY SCHOOL OYE - EKITI

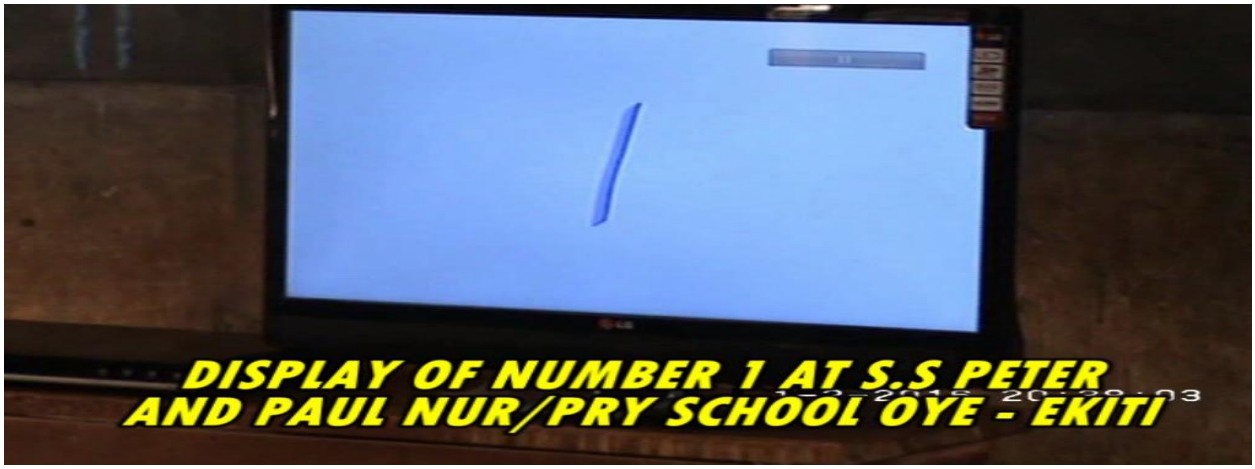

CHILDREN CONCENTRATING ON WHAT IS
BEEN DISPLAY ON THE SCREEN


Z
DISPLAY OF ALPHABET Z ON THE SCREEN AT
SS PETER AND PAUL NUR/PRY SCHOOL OYE - EKITI


1 2 3 4 5
6 7 8 9 10
DISPLAY OF NUMBERS AT C.A.C NUR/PRY
SCHOOL OYE - EKITI


1 2 3 4 5
6 7 8 9 10
DISPLAY OF NUMBERS AT S.S PETER
AND PAUL NR/PRY SCHOOL OYE - EKITI


10
DISPLAY OF NUMBER 10 AT C.A.C
NUR/PRY SCHOOL OYE - EKITI


1
DISPLAY OF NUMBER 1 AT S.S PETER
AND PAUL NUR/PRY SCHOOL OYE - EKITI