

INFLUENCE OF TEACHING STYLES AND LEARNING STYLES ON PUPILS'  
ACADEMIC PERFORMANCE IN NUMERACY IN ILORIN KWARA STATE

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MATRIC NO: 18/27/MEE 010

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A THESIS REPORT SUBMITTED TO THE DEPARTMENT OF EARLY  
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DEGREE IN EARLY CHILDHOOD EDUCATION

## DECLARATION

I hereby declare that this thesis titled 'Influence of teaching styles and learning styles on pupils' academic performance in Numeracy in Ilorin West Local Government Area, Kwara State, Nigeria' is my own work and has not been submitted by me or any other person for any degree in this or any other tertiary institution. I also declare that as far as I am aware all cited works have been acknowledge and referenced.



## DEDICATION

This thesis is dedicated to Almighty Allah for His mercy and protection.

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## ABSTRACT

Poor Academic performance in Numeracy has been linked to so many factors such as teachers' teaching styles, pupils learning styles, poor study habit, locus of control and dyscalculia among others. Therefore, this study examined the influence of teaching styles and learning styles on pupils' Academic performance in Numeracy in Ilorin West Local Government Area of Kwara State, Nigeria.

The study employed Correlational survey research design. The population comprised of all the primary school teachers' and pupils' in Ilorin West Local Government. The study sample size was 359 pupils, 29 schools and 29 teachers using proportional sampling techniques. The instruments for data collection were two questionnaires titled 'Teachers teaching styles Questionnaire (TTSQ), pupils' learning styles Questionnaire (PLSQ)' and Numeracy Achievement Test. The reliability coefficient of instruments are: 0.80, 0.73 and 0.71 respectively. Two research questions and six hypotheses were answered and tested in this study. ANOVA and Independent samples t-test were used to test the hypotheses at 0.05 level of significance.

The findings of the study revealed that teacher centered is the commonly adopted teaching styles for teaching Numeracy (Weighted Average = 3.06), Visual Learning is the predominant learning style among pupils, it has the highest ( weighted Average= 2.31), Teaching styles has no significant composite influence on the academic performance of pupils in Numeracy in Ilorin West L.G.A ( $F(2,26)=2.97; P > 0.05$ ), None of the independent variables of teacher centered style ( $\beta = 0.27; t = 0.99; p > 0.05$ ), learner centered ( $\beta = 0.18; t = 0.67; p > 0.05$ ) have significant relative influence on the dependent variable, there is no significant composite influence of learning styles on the academic performance of pupils ( $F(3,179)= 0.03; p > 0.05$ ), none of the independent variables visual ( $\beta = 0.017; t = 0.22; p > 0.05$ ), auditory ( $\beta = 0.23; t = -0.27; p > 0.05$ ), and kinesthetic ( $\beta = 0.01; t = 0.07; p > 0.05$ ) have significant relative influence on the dependent variable, there is no significant difference in the academic performance of male and female pupils in numeracy ( $t = -0.76; df = 27; p > 0.05$ ), and no significant difference exist in the academic performance of public and private pupils in numeracy ( $t = -0.453; df = 357; p < 0.05$ ).

Based on the findings of the study, it was concluded that teacher centered teaching style is the commonly adopted teaching style in the teaching of numeracy; this implies that pupils' were not given the opportunity to actively engage in their learning and if this trend continues, pupils' will continue to perform poorly in the subject. Visual learning styles is perceived to be the most adopted learning style as it was discovered to have the highest mean. The following recommendations were made: Both private and public School Teachers should adopt the use of learner centered approach such as hands on activities, problem based learning in the teaching and learning of Numeracy . Teachers should be sensitive to pupils' different learning styles such as Visual, Auditory and Kinesthetic so as to ensure effective pedagogy during teaching and learning. Teachers should be encouraged to attend seminars, training and workshops so as to keep them abreast of new and more effective teaching methods,

Keywords: Teaching styles, learning styles, Academic performance

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## CHAPTER ONE

### INTRODUCTION

#### Background to the Study

Education is a major tool for individual empowerment and National development. A National educational system is vital because it produces the personnel that are required to function in various facets of national life and development process. More importantly, numeracy plays a major role in pupil's education as it is particularly essential to develop the analytical thinking skills of the pupils. At the most basic level, numeracy involves counting, recognizing numbers and performing simple operations like addition and subtraction, learners should therefore be provided with numerous opportunities to monitor the skills. Upon exiting primary school, children should be comfortable with writing and identifying numbers, comparing numbers and quantities. Numeracy is used to develop critical thinking and problem solving. Pupils should be able to identify the proper strategies needed to come to conclusions and carry out calculations. Throughout primary school, pupils should progress from using concrete objects and written calculations to carrying out operations mentally (Carisa, 2018).

One of the most important aims for pupils at primary level is to develop positive attitude towards Numeracy. Pupils should understand and appreciate the functionality of numeracy. In addition to valuing numeracy, primary school pupils need to be taught how to use numeracy in their daily lives. They should be exposed to all the uses of numeracy. The technique should be such that pupils can relate to it even after the class is over (Tower, 2018). More often than not, numeracy teachers rely on methods that are difficult to grasp. They might appear all right on the surface, but when its application comes to the world outside the classroom, problems start to arise. Numeracy is considered as part and parcel of human thought and logic, and integral to attempts at understanding

the world and ourselves. We know that mathematical knowledge is fundamental, it is poorly taught in elementary schools and ultimately Numerical performance remains poor leading towards lower ability of individuals in accordance with their actual abilities (Decaro & Rotar, 2016). Teachers of Numeracy are also not satisfied with the performance of the pupils' in Numeracy. Low achievement in Numeracy is a great matter of disappointment.

Most of the Numeracy teachers do not make the teaching of Numeracy practical and exciting as they do not have the competencies to teach Numeracy dynamically which leads to negative attitudes amongst pupils implying improper guidance by the teachers as well (Saad & Adamu, 2016). Regular poor academic performance by most of the pupils in numeracy is regularly connected to the ineffective teaching methods by teachers who impart knowledge (Adunola, 2011). Other causes of poor performance in Numeracy among school pupils include misconception of the subject Numeracy as difficult one, fear and anxiety, parental attitude, interrupted teaching, and dyscalculia.

Different researches conducted on the adequacy of teaching methods demonstrated that the nature of teaching is regularly reflected by the accomplishments of the learners. According to Ayeni, (2011), teaching is the procedure that includes realizing attractive changes in learners in order to accomplish desirable results. Adunola, (2011), maintains that teachers should be familiar with various instructional methods that take into consideration the complexity of concepts to be covered. Classroom teaching is the major aspect of curriculum and it is a common term used in three distinct ways: it could be as a profession/occupation, it could be as a doctrine/body of knowledge and it could be as a formal school activity (Usman, 2014). It is a complex process of cooperation and inter-communication between teacher and the learners. It is not a one way flow of information from teacher to learner. It is a two-way communication process. It consists of setting

a stage for the interaction of both the teacher and the learners so as to effect smooth learning in a continuous and cyclic process. According to Vijayalakshmi (2016), teaching is both an art and a science. Able teachers always find ways and means to improve their teaching techniques. With the change in time the teachers are asked to employ newer methods for teaching their pupils more effectively so that they must be able to cope with the demand of the age. The progress of a country depends upon the quality of her teachers.

Everybody learns different ideas at different times at different paces; therefore, different teaching styles are necessary because the pupils need to be able to learn what teacher is teaching. However, the choice of teaching styles used can also depend on the nature of the subject matter, age of the learners, time available, instructional materials available, space available, philosophy of the teacher, among other things (Bohren, 2018). Since individual pupils learn differently, the need to use diverse teaching styles that will cater for individuals becomes essential.

Teaching styles refer to a process of selecting, directing, controlling and assessing the experiences of the learner to achieve desirable results, taking each child into consideration as well for the success of every child (Ajeigbe, 2019). It refers to various ways or means by which the teacher makes his or her lesson meaningful and interesting to the learners in the class in order to make learning more effective through the integration of models and materials to make interaction eventful and appropriate (Abdulkareem, 2014).

There are different teaching styles or instructional methods that teachers can use in the classroom to facilitate teaching. All these methods can be classified into either learner-centered approach and teacher-centered approach. Learner-centered styles encompass methods of teaching that shift the focus of instruction from teacher to the pupils. Learner-centered learning aims to develop learners' autonomy and independence (Armstrong, 2012).

Learner- centered learning are based on the constructivist learning theory that emphasizes the learners critical role in constructing meaning from new information and prior experience (Hoidin,2017). In a learner- centered learning, the teacher provides varieties of learning opportunities that learners would choose based on their interest and their learning abilities. It is an educational mindset that recognizes individual differences in learners. It emphasizes each pupil's interests, abilities and learning styles, placing the teacher as a facilitator of learning for individuals rather than the whole class.

In teacher-centered approach, learners are seen as empty vessels who passively receive knowledge from their teachers. Teachers act as the supplier of knowledge who is active while the learners are passive. In a teacher-centered classroom, teachers choose what the pupils will learn, how they will learn, and how they will be assessed of their learning (D avid, 2017).

When learners' do not learn effectively from how a teacher is teaching, let the teacher teach in the ways that learners will learn. All learners' are created equally and differently. The term learning styles has to do with the preferential way in which the learners absorbs, processes, comprehends and retain information. Individual learning styles depend on cognitive, emotional and environmental factors as well as one's prior experience. It is therefore important for teachers to understand the differences in their learners learning styles so that they can implement best practice into their daily routines (Fleming & Baume, 2020)

Psychology and educational theory had a long tradition of research into learning styles. Learning style refer to a range of competing and contested theories that aim to account for differences in individual learning (C assidy, 2014). The many theories share the proposition that humans can be classified according to their style of learning, a common concept is that individuals differ in the way they learn. The idea of individualized learning styles has greatly influenced education despite

the criticism that the idea was received from some researchers. Proponents recommend that teachers have to understand their learners learning styles and adapt their classroom methods to best fit each learners learning style (Theresa, 2019).

One of the most accepted understandings of learning styles is that learners learning styles fall into three categories as follow; visual, Auditory, and kinesthetic, (VAK) . It is therefore the responsibilities of teachers to understand the types of learners they have in their classroom so as to modify their teaching styles to suit the learners learning styles as the learners learn better when they receive instruction in the format that accommodates their preferred learning style (Theresa, 2019).

Visual learning style is a way of learning in which information is associated with images. This learning styles requires that learners first see what they are expected to know. Learners with visual learning styles are also referred to as visual-spatial learners. Visual learners have specific characteristics that make their learning style unique in school, visual learners typically remember what they read rather than what they hear, they prefer reading a story rather than listening to it, they learn better from seeing things written on the chalkboard, they love to study in a quiet place, they prefer to work alone rather than in groups, they ask a lot of questions to seek clarification, they are very good at spelling (Theresa, 2019)

The auditory learners generally learn by sound, remember what their teacher says and readily participate in class. They are good listeners and very social, which means they can sometimes get distracted from the lesson by everything going on in the classroom, they follows verbal directions, they are gifted in telling stories, very good at oral reports and class presentation, they like to speak and hear others speak in order to learn, but they may have trouble reading silently or staying engaged in a completely quiet classroom, they may or may not feel the need to take notes because

they have excellent memories, they may look as though they are not paying attention since they focus on sound (Grace, 2020).

Kinesthetic learners process information best when they are physically engaged during the learning process. Learners with Kinesthetic learning style have a hard time learning through traditional approach because they do not seem to understand when they listen without moving. Much of the time, they need to get up and move to get something into the memory. They have excellent motor memory, good at sports, perform well in art and drama, they are creative (Roell, 2018). There are so many factors affecting pupils academic performance in Numeracy such factors include Poor study habit, anxiety, Poor family structure, school type, gender etc (Eraikhuemen, 2015). Of interest to this research work is gender and school type. Gender and school types are more important in this study because when talking about teachers' teaching styles and pupils' learning styles, consideration will be given to Male and Female teachers as well as pupils respectively and the types of school (Private or Public) become paramount in determining the teacher teaching styles and pupils' learning styles than other moderator variables.

Studies of gender differences in construct such as self-esteem and self-concept have produced mixed results. It is generally believed that gender differences across various dimensions of self – concept (e.g., academic competence) become more apparent over time, and that there is a decline in the self-esteem and self-confidence of girls. Natalie, Karalyn, Kathryn, Katherine, and Kenneth (2010) established gender differences with externalizing problems throughout childhood and adolescence. It was observed by the researcher that pupils' particularly girls run away from Numeracy. This difficulty reaches its peak when it is taught by un-qualified and non-professional teachers (Grouns, & Cebulla, 2016). Gender disparity in Numeracy still persists in virtually all the schools in the country, the problem with gender difference could be that pupils' are having low

self esteem as they do not believe in themselves that they can do better no matter the type of gender. It has been the general belief in most parts of the country that male pupils' tend to perform better compared to their female counterparts in Numerical related or technology based subjects (Adeyemi & Ajibade, 2011).

Private schools, also known to many as non-governmental, privately owned, financed and managed by an individual or a group of individuals (Mosharraf, 2011) However, public schools are educational institutions that are owned, managed and financed by government rather than by individuals (Chris, 2014). Public education is generally available for all because it is not expensive. According to Ikeke (2017), Nigeria public schools were popular in the 80s because they had discipline, good teachers, good facilities and were attended by children irrespective of their social class and social economic background in the society, however, the story is different today, as a good number of public schools in Nigeria today lack good facilities and most teachers are not competent.

Ajayi (2005) in his own study revealed that school type makes a difference in pre-school cognitive development. However, Keeves (2007) conceded that type of school did not make contribution to pre-school education social and cognitive development. Adedigba (2015) submitted that it is likely the features of physical environment of ECE differ based on school type. This the author said can be as a result of funding which is most times made available in private proprietorship unlike public schools where most facilities needed at this level of education are not adequately provided. In her survey of the physical and climate of early childhood education learning environment in Kwara state, she found that the quality of physical learning environment in childhood schools in private and public schools in Kwara state was below average but private was found to be better than the public. As a result, differences in the quality of pre-school education based on school type will be

determined to further confirm what has been done by previous related research. It is against this background that this research work intends to find out what influence does the teachers teaching styles and pupils learning styles has on the academic performance of pupils in numeracy in Ilorin West Local Government Area of Kwara State.

#### Statement of the Problem

The results of National common entrance Examinations for 2017/2018 revealed a poor performance in Numeracy where 40% of the pupils' scored 50 marks and above while 60% scored below 50 marks (Yusuf 2019). Likewise in 2018/2019 48% of pupils' scored 50 marks and above while 52% scored below 50 marks and these Poor Academic performance in Numeracy has been linked to so many factors such as Teachers' teaching styles, pupils' learning styles, poor study habit, locus of control, dyscalculia among others. Every person learns different ideas at different time and paces; therefore, different teaching styles are necessary because the pupils' need to be able to learn what the teacher is teaching. For the pupils to be successful learners and for the teacher to also be successful with their professional career, utilization of different teaching styles does not only improve teaching and learning activities but it is also the best for both teachers and learners. More so academic achievement is a function of many variables including teachers' teaching styles, teachers' qualification and experience. The teaching styles used by teachers' largely determine pupils' performance in Numeracy.

More often than not, teacher fail to put into consideration the individual differences of acquiring ideas by the learners, the teacher always employ a particular approach to teach all the pupils' in a particular class and this may have adverse effect on some learners, a teacher cannot give what he does not have. However, the government and school administrators have made a lot of provisions

for seminars and workshop in order to change the story of using a particular approach for the group of pupils' without considering the learning style that is suitable for each individual learner. But all their efforts proved abortive due to the fact that some teachers have seen teaching as a stepping stone.

Other researchers have worked on factors affecting the teaching and learning of English language, causes of students' failure in mathematics, influence of teachers' qualification on pupils' academic performance and effect of study habit on pupils' academic performance were all examined in isolation. All these created part of the existing gap which this study filled This was done by examining the influence of teachers' teaching styles and pupils' learning styles on the pupils' academic performance in numeracy in Ilorin West Local Government Area of Kwara State.

#### Purpose of the Study

The main purpose of this study is to examine the influence of teachers' teaching styles and pupils' learning styles on pupils' academic performance in numeracy in Ilorin West Local Government Area of Kwara State. Specifically, the specific objectives are to:

- a. Examine which teaching styles that is commonly adopted by teachers for teaching Numeracy
- b. Investigate the learning styles that is predominant among pupils
- c. Determine the composite influence of teaching styles on the academic performance of pupils' in Numeracy
- d. Investigate the relative influence of teaching styles on the academic performance of pupils in Numeracy
- e. Assess the composite influence of learning styles on the academic performance of pupils in Numeracy

- f. Assess the relative influence of learning styles on the academic performance of pupils in Numeracy
- g. Determine the difference in the academic performance of pupils in Numeracy on the basis of gender
- h. Examine the difference in the academic performance of pupils in Numeracy based on school type

#### Research Questions

The following research questions were raised and tested for the study:

- i. Which teaching style is commonly adopted by teachers in teaching numeracy in Ilorin West L G A ?
- ii. Which learning styles is predominant among pupils in Ilorin West L G A ?

#### Research Hypotheses

The following hypotheses were formulated and tested for the study

H<sub>01</sub>: There is no significant composite influence of teaching styles on the academic performance of pupils in Numeracy

H<sub>02</sub>: There is no significant relative influence of teaching styles on the academic performance of pupils in Numeracy

H<sub>03</sub>: There is no significant composite influence of learning styles on the academic performance of pupils in Numeracy

H<sub>04</sub>: There is no significant relative influence of learning styles on the academic performance of pupils in Numeracy

H<sub>05</sub>: There is no significant difference in the academic performance of pupils in Numeracy based on gender

Ho6: There is no significant difference in the academic performance of pupils in Numeracy based on school type

#### Significance of the Study

The findings of this study would be significant to the children, teachers, policy makers, ministry of Education and school owner in the following ways; it would enlighten teachers on the importance of teaching with pertinent approaches, which would make children appreciate the value of their academic performance. The findings of this study would be beneficial to primary school teachers as it will help them to understand how to support children's learning through understanding their learning styles, by ensuring that appropriate approaches are employed for the children.

Additionally, the policy makers may be in a position to identify the key important areas which need to be reviewed so as to encourage teachers in improving their skills in making use of different approaches. This work will reshape and rephrase classroom teachers to pertinent approaches and also direct and inform them on area to be adopted in achieving this purpose.

This work will also help ministries of Education and other concerned agencies to organise workshop, seminars and other educational forum to equip both in-service and pre service primary school teachers on the different approaches to teaching to enhance their efficiency and effectiveness.

The school owners would benefit from this study as it will provide a basis to encourage teachers and also organize training for teachers on the utilization of appropriate styles and consideration of each and every child's learning styles in classroom.

#### Delimitation of the Study

This research examined the influence of teachers' teaching styles (Teacher centered teaching style and learner centered teaching style and pupils' learning styles (Visual learning style, Auditory learning style and kinesthetic learning style) on the academic performance of primary three pupils in numeracy in Ilorin West Local Government Area of Kwara State. The study was conducted in both private and public primary schools in Ilorin West Local Government Area of Kwara State. The participants are school teachers and learners.

#### Operational Definition of Terms

The following terms are operationally defined.

Teaching Styles: In this study, teaching styles are teacher centered teaching styles and learner centered teaching styles.

Primary Schools: These are educational institutions that are established for children aged 6 to 11 years which could either be private or public.

Learning Styles: In this study, learning styles are: Auditory learning style, Visual learning style and Kinesthetic learning style.

Academic performance: This refers to the pupils' result in numeracy

Ilorin West Local Government: This is the local government Area in which this study was carried out in Kwara state

## CHAPTER TWO

### REVIEW OF THE RELATED LITERATURE

This chapter consists of related literature reviewed under the following subheadings:

Theoretical Review

Gardner theory of Multiple Intelligence (1983)

Conceptual Review

Concept and objectives of primary Education

History of primary Education in Nigeria

Qualities of a Good teacher

Concept of teaching styles

The concept of learning styles

Factors to be considered in the choice of teaching styles

Concept of Numeracy

Teaching methods for Numeracy

Trend of Academic Performance in Numeracy

Empirical Review

Teaching styles and pupils' academic performance

Learning styles and pupils' academic performance

Gender and pupils academic performance

School types and pupils' academic performance

Appraisal of Literature Reviewed

Theoretical Review

The study would be guided by the Gardner theory of Multiple Intelligence which is presented by different opinions, views and arguments of scholars.

Over the past few decades, research in the field of learning has led to the discovery of the Theory of Multiple Intelligences. Gardner first outlined his theory in his 1983 book "Frames of Mind: The Theory of Multiple Intelligences," where he suggested that all people have different kinds of

"intelligences." Gardner proposed that there are eight intelligences, and has suggested the possible addition of a ninth known as "existentialist intelligence." The idea behind the theory of multiple intelligences is that people learn in a variety of different ways (Marens, 2020). In short, this theory states that each person has different ways of learning and different intelligences they use in their daily lives. While some can learn very well in a linguistically-based environment (reading and writing), others are better taught through mathematical-logic based learning. Still others benefit most from body-kinesthetic intelligence (learning by doing with the hands). Each person possesses each intelligence to an extent, but there is always a primary, or more dominant, intelligence (Herndon, 2018). Multiple intelligences refers to a theory describing the different ways students learn and acquire information. These multiple intelligences range from the use of words, numbers, pictures and music, to the importance of social interactions, introspection, physical movement and being in tune with nature. According to Gardner (2011) theory of multiple intelligences proposes that people do not have just an intellectual capacity, but have many kinds of intelligence, including musical, interpersonal, spatial-visual, and linguistic intelligences. Gardner (2000), defines intelligence as a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture.

Accordingly, an understanding of which type(s) of intelligence a student may possess can help teachers adjust learning styles, and suggest certain career paths for learners. The following Intelligences and the potential career choices were identified by Gardner according to Marens (2020)

#### Visual-Spatial Intelligence

People who are strong in visual-spatial intelligence are good at visualizing things. These individuals are often good with directions as well as maps, charts, videos, and pictures. Enjoys

reading and writing, good at putting puzzles together, good at interpreting pictures, graphs, and charts, enjoys drawing, painting. The potential career choices are Architect, Artist, Engineer.

#### Linguistic-Verbal Intelligence

People who are strong in linguistic-verbal intelligence are able to use words well, both when writing and speaking. These individuals are typically very good at writing stories, memorizing information, good at remembering written and spoken information, enjoys reading and writing, good at debating or giving persuasive speeches, able to explain things well. Potential Career Choices includes: Writer/Journalist, Lawyer, Teacher

#### Logical-Mathematical Intelligence

People who are strong in logical-mathematical intelligence are good at reasoning, recognizing patterns, and logically analyzing problems. These individuals tend to think conceptually about numbers and relationships, enjoy thinking about abstract ideas, likes conducting scientific experiments, Good at solving complex computations. The potential career choices are: Scientist, Mathematician, Computer programmer, Engineer, Accountant/

#### Bodily-Kinesthetic Intelligence

Those who have high bodily-kinesthetic intelligence are said to be good at body movement, performing actions, and physical control. People who are strong in this area tend to have excellent hand-eye coordination, good at dancing and sports, enjoys creating things with his or her hands, excellent physical coordination, Tends to remember by doing, rather than hearing or seeing. Potential Career Choices includes: Philosopher, Counselor, Salesperson, and Politician

### Intrapersonal Intelligence

Individuals who are strong in intrapersonal intelligence are good at being aware of their own emotional states, feelings, and motivations. They tend to enjoy self-reflection and analysis, including daydreaming, exploring relationships with others, and assessing their personal strengths. Potential career choices includes: Writer, Theorist, Scientist,

### Naturalistic Intelligence

Naturalistic is the most recent addition to Gardner's theory and has been met with more resistance than his original seven intelligences. According to Gardner, individuals who are high in this type of intelligence are more in tune with nature and are often interested in nurturing, exploring the environment, and learning about other species. Doesn't enjoy learning unfamiliar topics that have no connection to nature, these individuals are said to be highly aware of even subtle changes to their environment.

They are interested in subjects such as Botany, Biology, and Zoology

Gardner was surprised to find that Multiple Intelligences theory has been used most widely in educational contexts. He developed this theory to challenge academic psychologists, and therefore did not present many educational suggestions. For this reason, teachers and educators were able to take the theory and apply it as they saw fit.

As it gained popularity in this field, Gardner has maintained that practitioners should determine the theory's best use in classrooms (Gardner, 2011).

### Relevance of Multiple intelligence theory to this work

The most important educational implications from the theory of multiple intelligences can be summed up through individualization and Pluralization. Individualization posits that because each person differs from one another there is no logical reason to teach and assess students

identically. Technology has now made it possible for more people to access a variety of teachings and assessments depending on their needs. Pluralization, the idea that topics and skills should be taught in more than one way, activates individual's multiple intelligences.

Presenting a variety of activities and approaches to learning helps reach all students and encourages them to be able to think about the subjects from various perspectives, deepening on their knowledge of that topic (Gardner, 2011b).

A common misconception about the theory of multiple intelligences is that it is synonymous with learning styles. Gardner states that learning styles refer to the way an individual is most comfortable approaching a range of tasks and materials. Multiple intelligences theory states that everyone has all eight intelligences at varying degrees of proficiency and an individual's learning style is unrelated to the areas in which they are the most intelligent.

For example, someone with linguistic intelligence may not necessarily learn best through writing and reading. Classifying students by their learning styles or intelligences alone may limit their potential for learning.

Research shows that students are more engaged and learn best when they are given various ways to demonstrate their knowledge and skills, which also helps teachers more accurately assess student learning (Hammond, 2010).

Learning about Gardner's types of intelligence helps students start to see they each have a unique set of capabilities and skills. In school, we tend to focus primarily on verbal-linguistic and logical-mathematical intelligence, but many students are highly skilled/intelligent in other ways.

Hani (2014) supports Gardner's theory. Morgan's research indicated that differentiated instruction benefits all students, but must be presented by well-prepared, experienced and knowledgeable teachers. This diversity, according to Gardner, should impact the way people are educated. He stated that these differences "challenge an educational system that assumes that everyone can learn the same materials in the same way and that a uniform, universal measure suffices to test student learning." Joan Hanifin, an Irish researcher, determined in a 2014 publication that the outdated system of education in Ireland was adversely affecting students in the long-term. By not embracing multiple methods of teaching based on different intelligences, student Gardner argues that "a contrasting set of assumptions is more likely to be educationally effective. Students learn in ways that are identifiably distinctive. The broad spectrum of students—and perhaps the society as a whole— would be better served if disciplines could be presented in a number of ways and learning could be assessed through a variety of means." In 2010, Bas and Beyhan presented findings based on their study of using Multiple Intelligences theory in learning English. They determined that MI-based learning is more effective in terms of student achievement levels and their attitudes toward learning. Their research supports Gardner's assertion that MI-based learning will serve students well. Educators have positively responded to Gardner's theory. It has been embraced by a range of educational theorists and, significantly, applied by teachers and policymakers to the problems of schooling.-valued."All intelligences are needed to live life well. Teachers, therefore, need to attend to all intelligences, not just the first two of verbal-linguistic or mathematical-logical intelligences, which have historically taken precedence .When educators are given the freedom to move away from the traditional, visually-based methods of teaching, they will have the opportunity to reach more students, more effectively. By teaching to the dominant learning intelligences, teachers will find students to be more productive, more receptive and more willing to engage in the learning

process. As so many educators have already embraced this theory, it is time for educational administrators to take notice of new techniques that can be successful based on the research of Howard Gardner and the other researchers who have followed.

#### Conceptual Review

The following subheadings were reviewed conceptually

#### Concept and Objectives of Primary Education

Primary Education according to the national policy on Education (2004), is the education given in an educational institutions for children aged 6 to 11 plus. Since the rest of the education system is built upon it, the primary level is the key to success or failure of the whole system.

The goals of primary Education are as follows:

1. Include permanent literacy and Numeracy, and ability to communicate effectively, primary education provide the recipient with the opportunity to be able to read and write, they were taught the ability to use language effectively in and outside the school environment. They were exposed to the use of numbers and letters that will be useful for them on daily basis as they interact with people and become reasonable member of the society.
2. Primary education lays a sound basis for scientific and reflective thinking, science at the primary school level nurture curiosity by allowing pupils to ask question and develop the skills they need to answer those questions because by nature children are naturally curious. Children were given the opportunity to investigate into actions and find out the solutions to the identified problems thereby promote the scientific thought in them.
3. Another goal of primary education is to give citizenship education as a basis for effective participation in and contribution to the life of the society. At the primary school level, pupils are exposed to citizenship education so they can become a successful learners, confident individuals and responsible citizens who make a positive contribution to the society. Pupils were exposed to their rights as well as the responsibilities they owe the society, they were exposed to culture and the need to live and appreciate the cultural diversity, though our tribe and tongue may differ but we are still one nation.
4. Mould the character and develop sound attitude and morals in the child: primary education is not meant to be able to read and write alone but to develop in the recipient positive attitudes towards others. Primary education is structured in such a way to allow the learners develop sound attitude by showing respect to others, maintaining integrity, honesty, empathy towards others. The teacher should therefore endeavor to be a good role model for their learners to emulate as children do what they see us doing.

5. Develop in the child the ability to adapt to the child's changing environment: primary education promotes adjustability in the child by ensuring that the environment is stimulating and appealing and they will be guided to behave in a way that is acceptable in the school by encouraging them to follow the laid down school rules and regulations which will later help them later in life to be able to cope with an environment they find themselves.
6. Give the child the opportunities for developing manipulative skills that will enable the child function effectively in the society within the limit of the child's capacity, primary education is meant to produce independent and self-reliant learners by providing them with different skills which will help the learners to be employers of labor after graduating, hence promote independent.
7. Provide the child the basic tools for further educational advancement, including preparation for trades and crafts of the locality. Primary education provides the recipient with the needed tools that will be needed by the learners as they progress as primary education is the foundation on which the later educational knowledge will rest. Parents should endeavor to enable their children have access to qualitative primary education as it determines who they are in future. All what the primary school pupils will learn in the school must be tailored towards achieving the above goals.

#### History of Primary Education in Nigeria

The primary education in Nigeria passed through different stages and different authorities exercised its control from time to time. The church missionaries introduced Western or Formal Education to Nigeria in 1842 and handled the management of primary education system. After much criticism from different quarters about the crude and lack of proper coordination of the

system by these missionaries, the British government intervened through establishment of various Education Ordinances and Codes. It is worth mentioning that the colonial government in Lagos made intermittent attempts to assist some of the missions in the management of schools between 1870 and 1876. While a bill was passed as an ordinance (first of its kind) for the promotion and assistance of education and it covered the West African territories of Lagos, Gambia, Gold coast and Sierra Leone.

In 1887, there was the enactment of the first purely Nigerian education ordinance as a result of separation of Lagos from Gold Coast in which it became the Colony and Protectorate of Lagos. This ordinance was promulgated to increase the betterment of education administration. In one word, the British government had no clearly defined policy on education for its African colonies during this time till 1925. It was Phelps-Strokes' report that forced the British Colonial Government to demonstrate its interest in African education. So, the principles in which the educational systems of the colonized countries should be based set out by the 1925 Memorandum on education. As from 1946, Nigerian were deeply involved in the administration of their educational system as a result of Arthur Richard's Constitution, which created Regional Government - Northern, Eastern, and Western regions. It must be stated that during this era, the colonial overlords were still supervising Nigeria's educational affair and partly funding it. The missionaries and voluntary agencies were also with the control of staff recruitment, supervision of staff, and the funding of their own schools only with grant-in-aid as subvention from the government.

Some years prior Nigeria's independent, the primary education started developing at different rates in different parts of Nigeria. The Universal Primary Education (UPE) was introduced as first of its

kind in January 1955 at the then Western Region followed by Eastern Region in 1956 and later by Federal Government in September 1976.

This programme indicated the government dynamic policy to favour the education of the masses on the basis that every Nigeria child has an inalienable right to a minimum of six years of education if he is to function effectively as a citizen of Nigeria that is free and democratic, just and egalitarian, united and self-reliant, with full opportunities. After Nigeria has gotten independence in 1960, there was increase clamour for government take-over of schools from the missionaries and voluntary agencies, at least, this will allow the government to revert the old system and to tailor it to meet the needs of the new nation. Adesina (1990), reported that it was contended that absolute take-over of schools would improve their curriculum, teacher quality and centralized provision of instructional resources, minimize inequalities and provide a dynamic center of leadership for educational innovation. So, there was government take-over of schools in 1970.

At the end of the Nigerian Civil War in 1970, a new dimension in public administration and funding of education emerged. That was the government take-over of primary and secondary schools from the voluntary agencies. The trend was started by the then East Central State in 1971 and by the end of that decade most states of the federation especially the Southern states had followed suit. This greatly increased the government burden in education finance. The government was able to expand its activities in education sector during 1970s due to increased revenue from oil. With this, the government felt capable of embarking on the Universal Primary Education (UPE) in 1976. At that time, the government assumed full financial responsibility of the scheme. This scheme radically expanded public involvement in education financing and administration.

With the inception of the second republic in 1979, the Federal government withdrew its direct subsidy for primary education and transferred the responsibility to local governments. This effectively marked the end of Universal Primary Education (UPE) most states of the federation. During this period, most states quickly introduced fees and levies at all levels of education. The military take-over in 1984 helped make this state of affairs nationwide. The states out of party policy doggedly struck to UPE albeit in the name of feeling free to introduce fees. In 1986, the Federal Government again abolished tuition fees in primary schools nationwide. As a result of this, it started making direct grants to local government for primary education. In 1989, this grant included funds for part payment of salaries for primary school teachers.

In 1976, the management of primary was taken over by the Federal Government while the administration and funding was transferred to the state and Local Governments in 1979. As a result, different management and funding arrangements were made by different states during this period. In 1988, the National Primary Education Commission (NPEC) was established with Decree 31 of Federal Republic of Nigeria 1988 to manage the affair of primary education. It was later scrapped by the Federal Government under the provision of Decrees 2 and 3 of 1991, which vested the full responsibility of the administration of primary education in the hand of Local Government. With the Decree No. 96 of 25th August 1993, the National Primary Education Commission was re-established with State Primary Education Board (SPEB) and Local Government Education Authority (LGEA) and they were once again in control of primary education in Nigeria. The Local Government Education Authority (LGEA) was assigned the day-to-day administration of primary schools in its area of jurisdiction. While, the State Primary Education Board (SPEB) was charged with administration of primary schools in the state.

The Local Government Councils appoint Education Secretaries who then report directly to the SPEBs. These arrangements have resulted in general conflicting pressures on the Education Secretaries due to the different roles played by the SPEB's and the Local Government Councils (LGC's). There are also areas of overlap in the functions of different levels of management, which need to be addressed. The National Primary Education Commission was the overseer to the State Primary Education Board (SPEB) of all the states of the Federation. But the Federal Government supervised this commission. From this arrangement, it is obvious that the management of primary education is no more one government affair; it involves all tier of government.

According to the provision of this decree, "the National Primary Education Commission receives the National Primary Education Fund as established by this decree from the Primary Education Board of each state and the Federal Capital Government Sponsored Special Primary Education Projects in accordance with the formula prescribed in this decree as the Transitional Council, from time-to-time prescribe". This was the condition of primary education funding and administration since 1993 to the time when the newly democratic government came into power in May 29, 1999. In replacement of Universal Primary Education (UPE) is the currently introduced Universal Basic Education (UBE), which was launched on 30 September 1999 in Sokoto. It is also free and universal in nature like before but now in addition, it is compulsorily accommodating children from primary school through Junior Secondary School. Various responsibilities are assigned to all levels of government (federal, state, and local), which is not much different from what was in existence before now.

#### Qualities of a Good Teacher

A teacher needs to be an effective communicator and motivator, as it is irrelevant how much knowledge a teacher has if that knowledge cannot be shared and conveyed to the students in an

interesting and understandable way. In schools, we have different types of teachers. There are those who are just in school for the sake of it, or they are just in teaching career so they can have some source of income for their upkeep. This kind of teacher will never listen or even understand the essence of pupils/students in school. But of course they can't all be the same. There are those who know the qualities of a good teacher, and they tend to keep or prove in action. They will always listen and reason with the students/pupils and be open-minded when dealing with them; they will set a good example since every child will admire being like their teacher. Their moral value will always be on top, of course, they are educating other people. They discipline and judge fairly, and above all, a good teacher will have the passion for teaching and readiness to pass on knowledge and wisdom. According to Ashley, (2016) and Katie, (2018) Students are most affected by the quality of their teachers. Not only do they interact with teachers every day in the classroom, but the quality of that interaction matters for their future.

1. Teachers need to be able to build trusting relationships with students in order to create a safe, positive, and productive learning environment. For example, great teachers are “Willing to listen Patient, caring, and kind personality
2. Knowledge of learners .This is a broad category that incorporates knowledge of the cognitive, social and emotional development of learners. It includes an understanding of how students learn at a given developmental level; how learning in a specific subject area typically progresses like learning progressions or trajectories; awareness that learners have individual needs and abilities; and an understanding that instruction should be tailored to meet each learner's needs. One student eloquently described it as: “The teacher understands the pace and capacity of the student.

3. Dedication to teaching. Dedication refers to a love of teaching or passion for the work, which includes commitment to students' success. Responses often referred to loving the subject matter or simply being dedicated to the work. To a student, this means a teacher should be "always willing to help and give time."
4. Engaging students in learning, teachers should be able to engage and motivate students to learn. Researchers talk about three types of engagement that are required for students to learn: cognitive, emotional, and behavioral. Survey respondents mostly focused on making content interesting and the ability to motivate students to learn.
5. To be a good teacher patience is necessary. Some children may take longer to understand certain subjects or pieces of information and it is vital that you are patient and take the time to fully explain so that they understand and learn from your teaching. In the classroom, it may require that the teacher will need to explain things in a little more depth before some learners will fully understand, and this would only help their learning if the teacher had the patience to spend extra time on the same thing. Many teachers wouldn't do this and learners would therefore struggle in their subjects. As a teacher it is your job to make sure that all pupils can work and learn to the best of their ability, and without the patience to do so you are not fulfilling your role as a good teacher. a good teacher would consider their teaching style to make sure that it is meeting the needs of all learners, remembering that everyone learns in different ways – visually, orally and kinesthetically.
6. An extremely important virtue for a good teacher to hold is respect. Teachers must be able to show their pupils that they respect everyone around them, no matter what religion or culture they belong to. Respect is a quality which everybody should have, and so if teachers reinforce this idea with their own actions, children are more likely to follow and respect

others. Teachers should always consider themselves to be role models for their pupils and so they should model this virtue alongside all of the others so that children can learn from it.

7. Empathy is a very important quality in being a good teacher. Being empathetic allows teachers to understand their pupils' emotions and gives them the ability to relate to them. Pupils originate from various cultures and backgrounds and so teachers need to be able to understand each individual's situation as this will help the children to feel more comfortable to discuss any problems which they might be having at home. It is necessary to keep professional boundaries between student and teacher, but learners should see their teacher as someone that they can approach if they need or want to. Having empathy can help the children to understand that they are not alone and that the things that they are feeling are normal.
8. Integrity is an important characteristic for a good teacher to have. Integrity is the quality of honesty and having strong moral principles and so it is necessary for the teacher to have these so that the pupils can be educated to act in the same way. Pupils should see their teachers as a figure to look up to and so integrity allows teachers to be a role model for their pupils.

### Concept of Teaching Styles

Teaching is a process of imparting knowledge which involves many activities on the part of the teacher and the learners (students). Teaching styles therefore includes these various means and activities of the teacher and learner in the learning process geared towards acquiring ideas, knowledge, values and skills that are built within the educational aims and objectives. According to Bannon (2016) teaching styles defines various ways information is presented to the learners

specifying the nature of the activities in which the teacher and the learner will be involved during the teaching and learning activities. Sawa (2002), from another perspective defined teaching styles as the framework on which what learners need to learn is conveyed to them by the teacher. In view of these definitions teaching methods can be asserted as primarily the description of learning objective oriented activities and the flow of information between teacher and pupils in the teaching and learning processes.

Teaching styles involve numerous activities of the teacher and the learner such as questioning, explanations, demonstration or directions. The activities can be referred to as skills or techniques. Thus teaching styles involves different techniques. The use of these techniques vary with different teaching styles and depend on many factors such as type of learning objectives, nature of subject, age of students, number of students among others. Hence, there are different types of teaching styles: Lecture/expository method, discussion, demonstration, recitation, lecture/discussion, Games and simulations, problem-solving, Role-play, scaffolding, inquiry learning among others. These different teaching styles are grouped by some educators (Shawnee, State University, 2001; Sawa, 2002); O'Bannon, 2002 and Campbell, 2006) into two approaches: teacher-centered and student-centered.

#### Teacher-Centered Approach

Teacher-centered approach includes all the teaching styles that the teacher dominates in the lesson procedure and takes the lead in coordinating the classroom activities as regards to what to be done. O'Bannon (2002) stated that teacher-centered approach includes all the teaching methods grounded in behaviourism such as Lecture, demonstration, discussion and recitation etc. Teacher-centered classroom is thus rigidly structured and only factual information is conveyed to learners.

For instance, in the lecture method, the instructor presents fact and principles orally. In view of this, the lecture method has been criticized to be a poor method of teaching hand-on skills in sciences including Biology although it provides for the effective use of time and manpower especially in presenting ideas to a large group of people.

Considering other teacher—centered approaches O'Bannon (2002) described demonstration as a teaching method that involves the teacher showing students a process or procedure involved in a learning process. The demonstration method has some advantages over the lecture method in skill acquisition, the disadvantage remains that the learners follow the rigidly prescribed probed procedure by the teacher and this makes it not effective for science teaching. Then the discussion method among other teacher-centered approach is a more advanced teacher-centered approach in which an issue in the learning content is posed as a question by the teacher and each of the students chips in different ideas etc. The discussion method also has its prone and cones with some degrees of student-centeredness as the teacher decide what is to be discussed. However, in all the mentioned teaching methods the teacher determines the content and the questions and takes upper control in the flow of information or knowledge hence they are considered as teacher-centered approach to teaching.

The term teacher-centered approach therefore comes from the roles of the teacher in the traditional classroom as possessor of knowledge and decision maker and decides how knowledge should be transferred to learners in the teaching and learning process. Ibe (2003) noted that the traditional teaching methods stress transmission of knowledge in a manner that emphasize and encourage memorization. In line with this view, Guisti (2008) described the approach as one fact consisting of assign, recite, test and then discuss the text procedure. From the foregoing it indicates that teacher-centered approach includes teaching methods that involves only unidirectional flow of

information from the teacher to students and does not permit exchange of ideas that makes teaching and learning process active.

Teacher centered teaching styles include:

Direct instruction, is a teacher centered method in which teacher stands in front of a classroom and presents the information about the instructions to the learners (Renard, 2019). In direct instruction, the teacher starts the lesson with introduction by building up on the learners previous experience, presents the new material which can be done through demonstration. After the instruction has been delivered, the teacher evaluates to check whether the learners understands the topic before moving on to the new topic. The advantages of direct instruction includes: direct instruction saves time; it does not need much preparation from the teacher and it is less expensive. The limitations of direct instruction includes; learners may lack skills required to capture all the information presented in the classroom and it does not take individual differences into consideration (Smith, 2019).

Demonstration method, according to Babarinde (2014), this is an audio-visual explanation of an ideas in the presence of learners either as a way of showing them how to do it themselves or as a way of illustrating principles. Demonstration is usually carried out by the teacher in front of the learner. This method is suitable for teaching young learners and for illustrating a simple phenomenon. Demonstration method has the following advantages: It aids learning as learners are able to retain more permanently what they have witnessed; it is very efficient and effective when introducing new skills; learners are familiar with apparatus and how to carefully and correctly handle them; it allows learners to have firsthand experiences in addition to the theoretical knowledge. The limitations of demonstration method include: problems of poor audibility and visibility may arise when class is big; the implication of improper handling of demonstration is that if poorly done by the teacher, pupils will have the belief that since their teacher cannot do it,

then no one can do it again. It may also lead to injury on the part of the learners. It is time-consuming and if not properly handled by teacher, it may lead to a waste of time as learners may not achieve much at the end of the class.

### Learner Centered Approach

According to Maria (2003) Learner-centered teaching styles shift the teacher's role from being a provider of information to being a facilitator of learning. This shift in focus increases learners engagement in the learning process and makes learners more responsible for their own learning progress. With learner-centered, learners become invested in their own learning because they are actively motivating the learning process.

By creating a learner-centered environment, each learner is motivated to remain engaged in the learning process. This is especially true in higher grades, where students' motivation to learn increasingly centers on the interests and subjects they believe will be personally beneficial. Learner-centered teaches fosters independence. While this style of teaching is applicable to all levels, in higher grades, there is a real push to help students transition from dependent student to independent adult. Learner-centered teaching achieves this goal through giving students the autonomy they need to drive their own learning process, while still having a teacher available for guidance when needed.

There are different learner centered teaching styles, two of which that are commonly used at the primary school level are examined in this study

Inquiry- based learning is a learner centered approach that triggers curiosity in learners. It involves interaction, clarification, questioning and design. It is an instructional model that centers learning on solving a particular problem or answering a central question. (Heick, 2019).

In inquiry- based learning, learners are active and curious at finding solutions to any identified problems. The advantages of inquiry based learning are; It prepares learners brain for learning as starting class with a short activity helps the learners absorb information throughout the day, it builds up comprehension, critical thinking, and communication skills that help not only in class but in day-to- day life; it helps learners make connections about what they learn and therefore deepens their understanding; learners are more engaged, which helps them develop a passion for exploration and the teachers are able to reach the entire class through differentiated instruction strategy (Crocket, 2019).

Learning through play is a method of teaching that enables overall development of the child. Through play, children can develop social and cognitive skills, emotionally and social and the ability to gain self-confidence required to engage in new experiences (Kanal, 2018). Children get excited if and when fun and play are involved in their teaching and learning activities as children learn better through play activities. Teachers should develop different learning activities by creating joyful environment and plan activities ranging from simple to complex. The advantages of learning through play include: It turns the entire learning into fun by involving play in the act of learning; it develops the feeling of satisfaction among children; every child is given equal opportunities for learning and participation, it helps children to connect with peers and teachers easily and it facilitates the overall and holistic development. The limitations of learning through play includes; it does not take individual differences into consideration and if not properly planned by the teacher, it may lead to mere entertainment (Kanal, 2018).

Learner-centered design focuses on the quality of student learning (Barr & Tagg, 1995). It is based on the understanding that each learner has different characteristics and these characteristics should be employed to elevate both training and learning.

Jackson, Stratford, Krajcik, and Soloway, 2000; Quintana et al., 2000 further explained that learner-centered design "considers learning while doing; it supports learners in the ways of using the software and throughout the use of it. It also indicate why and how to do the learning tasks. Moreover, these authors have defined learner-centered design as “the new challenge for human-computer interaction, with the goal of providing support for both learning a task and doing it.

According to Jonassen (1995), there are four distinct attributes of learner-centered effective Learning courses:

Context: Learning tasks should have a real world relevance that allows learners to attach personally with what they are learning.

Construction: Learners should be able to link their own experiences and past knowledge with new learning.

Collaboration: A problem-solving scenario allows learners to develop, test, and analyze their ideas while being exposed to others' opinions. Each learner will arrive at an individual conclusion after collaboration is completed.

Conversation: Communication with and within learners is essential to effective eLearning courses. Learners should spend time in conversation while planning and make sense of new learning.

## The Concept of Learning Styles

It is important to remember that everyone learns differently. Some learn best by listening, some have to observe every step, while others have to do it. The fact is that individuals need all three modalities to truly commit information to memory: visual, auditory, and kinesthetic. While most are stronger than another. A learning styles is a student consistent way of responding to and using stimuli in the context of learning. Keefee,(2009) defines learning styles as the “composite of characteristics of cognitive, affective and physiological factors that serve as relatively stable indicators of how a learner perceive, interacts with and respond to the learning environment” Stewart and felicetti, (1992) defined learning styles as those “educational conditions under which a student is most likely to learn.” Thus, learning styles are not really concerned with what learners learn but rather how they prefer to learn.

While the learning profession has long recognized the need for innovative instructional activities that relate to the diverse learning styles of learners, there is some question as to how meaningful they are to the learning environment. That is most researchers agreed that we have various learning styles and preferences, however, the research tends to agree that it is relatively unimportant when designing learning programs. Rather it is far more important to match the presentation with nature of the subject, such as providing the correct learning methods, strategies, and context rather than matching individual preferences (coffield, et. al., 2004).

Learning styles are various approaches or ways of learning. They involve educating methods particular to an individual, which are presumed to allow that individual learn best. Learning styles is considered as the major influence on the success of education among students and educators (Sabri, 2014).It is based on personal characteristics and preferences and is the manner in which he or she learns. Research point out to the fact that students and trainees in general learn effectively with teaching pedagogy that matches their learning preferences (phabakar, 2009) learning is a

lifelong and continuous process. Teacher must assess individual learning style preferences and then adapt their delivery technique to improve the pace of learning according to learning styles of their learners. Learning styles can help students learning more easily and effectively.

#### Factors to be Considered in the Choice of Teaching Styles

There are several factors that determine the choice of teaching styles in the classroom. The following are the factors according to Usman, (2017)

**The Nature of the Learners,** For example the slow or fast learners. If the number of slow learners in the class is higher than that of the fast learners it will force the teacher to use such a method that is very easier for those slow learners to understand the subject matters.

**Class Size:** The number of learners in a class also determines the most effective teaching styles to use e.g. the teaching style that can be used in small class may not be effective in a large class due to the number of learners to cover for example question and answer method can be used in a small class but will not be effective in a large class because only a few number of learners would be actively involved.

**Availability of Teaching and Learning Aids:** Instructional materials are indispensable to effective teaching and learning. The availability or non availability of certain materials may limit the choice of certain teaching styles. For instance, the teacher can employ demonstration method to teach only when the necessary materials and equipments are available.

**Time Available:** some teaching styles are more time consuming than others. Where there is a lot of time to present a lesson, the teacher can employ methods such as storytelling, discussion and excursion methods but where time is limited, less consuming methods need to be utilized e.g. lecture method.

**Subject Matter:** The subject at hand is an important consideration when choosing a teaching method. Different teaching styles should be applied when teaching different concepts. For example in a practical class, the method of teaching is most likely to be demonstration while demonstration is not applicable in other subjects.

**Objectives of the Lesson:** objectives of the lesson to a large extent will determine what styles the teacher will use in teaching. If the objective requires the learner to be able to show or do at the end of the lesson, then the most suitable method to be used will be demonstration or play way methods.

### **Concept of Numeracy**

Young children develop ideas about numeracy in the course of their day-to-day lives quite naturally and without recognizing them as such. As opposed to the general and wrong thinking of children being too small to understand numerical concept and engage in numerical activities, Copple, (2010) notes that young children continually construct numerical ideal based on their experiences with the environment, their interaction with adults and other children, and daily observations. Thus, in the past 25 years, as the intuitive, informal numerical knowledge of young children often surprises early childhood teachers (Copple,2010), Studies of the development of early numerical have switched from looking at what pre-school children cannot do to what they can do. Consequently, numeracy has risen to the top of education agenda in the way that language and literacy did a decade earlier (National Research Council, 2009), and evidence suggests that early numeracy may be an even better predictor of school achievement than early literacy (Stipek, shoenfeld, &Gomby, 2012). Moreover because numerical understanding is less dependent on language than literacy skills are, dual language learners can experiences early success in this important area of learning (National Mathematics Advisory Panel, 2008).

The National Council of Teachers of Mathematics (NCTM) standards (2002) define five content area: number and operations, geometry, measurement, algebra, and data analysis and probability and also defines five standard process: problem solving, reasoning and proof, connection, communication, and representation. Problem solving and reasoning, as the position statement phrases it, are the heart of numeracy:

While content represents “the what “of early childhood numeracy education, the process... make it possible for children to acquire content knowledge. These processes develop over time and when supported by well-designed opportunities to learn. Children’s development and use of these processes are among the most long lasting and important achievements of numerical as the children reflect on them, represent them in various ways, and connect them to other ideas National Association for the Education of Young Children (NAEYC) & National Council of Teachers of Mathematics (NCTM, 2010).

The goal of early numeracy education is to build “numerical power” in young children (Baroon, 2000). This numerical power has three components: a positive disposition to learning and using numeracy: understanding and appreciating important of numeracy: the process of numerical enquiry.

Teaching Methods for Numeracy

Demonstration Method

It is a generally accepted learning theory that the greater the degree of active participation and sensory involvement by the learner, the more effective will be the basic and most often used, method of instruction for teaching skill-type subjects is the demonstration method (Ojo, 2011). One of the most effective methods in the teaching of skills and performance oriented subjects in numeracy. The teachers using demonstration method explain steps in operations and techniques of handling numeracy. The teacher equally goes further using instructional materials to demonstrate to the students the steps or processes involved in the use of the gadgets. Students learning with this method observe and ask questions for clarification.

#### Discovery Method

Discovery method can be considered as any procedure in which the teacher pose appropriate problems to encourage students to think for themselves and become more independent. The major proponent of discovery approach is Bruner. Bruner (2004) agrees that learning involves the active processing of information, and that it is organized and constructed in a unique way by each individual. He stressed that knowledge about the world is not simply poured into the individual. Instead, individuals attend selectively to the environment, process and organize the information into the unique models of the environment. With this method of teaching OTM, much learning is expected through exploration that is motivated by curiosity.

#### Socratic Instructional Method

According to Nnadozie (2000), Socratic method is a method of teaching which calls for the active co-operative quest for knowledge. This method is sometimes referred to as the question and answer method of instruction. Socratic method is used to know the ability of pupils in response to certain questions after intensive practical training. This method has an added advantage of helping the students to develop mental processes of emphasis on the cognitive and affective domain.

## Trend of Academic Performance in Numeracy

Numeracy is seen by society as the foundation of scientific technological knowledge that is vital in social-economic development of a nation. It is in realization of the vast applications of numeracy that made Eraikhuemen (2003) to posit that a disciplined and ordered pattern of life can only be achieved through the culture of numeracy. Unfortunately, pupils' performance in this important subject over the years has not been encouraging at the primary levels of education in Nigeria. According to the institute of Education, Primary schools in Abuja chief examiners report, the worst performance in the 2013 / 2014 common entrance examination for primary pupils in Nigeria in numeracy were Numbers and Basic Algebra. The reports made available to the institute of Education indicated that 32.9% of the candidates who took the numeracy paper in Numbers and Basic Algebra had the grades D or D+ and 20.9% failed in the subjects. Educators, trainers, and researchers have long been interested in exploring variables contributing effectively for quality of performance of learners. These variables are inside or outside school and affect students' quality of academic achievement. These factors may be termed as student factors, family factors, school factors and teacher factors (Crosnoe, Johnson & Elder, 2004)

## **Empirical Reviews**

### **Teaching Styles and Pupils' Academic Performance**

**Research on teaching styles and pupils' Academic performance by Izwan and Anur (2016). Investigated on teaching styles preference by students on their achievement in history subject. This study aims to look at teaching styles desired by students on their achievement in History subject among secondary school students in Johore, Malaysia. This study employed questionnaires to enable researchers to obtain massive data of 200 students comprising of 100 male and female students respectively. Data were analyzed through descriptive and inferential statistics to determine the mean, correlation and t- test of teaching styles on the achievement of History subject. The study is somehow similar with this study on the teaching style on gender but the study incorporate learning style and pupils performance which were not considered for this empirical**

study. The result from t-test also showed that facilitator teaching style is preferred by both male and female students. In this regard, the correlation test reported that there is no significant relationship between teaching styles with examination scores on students' achievement.

Emilyn, Patience, Anthony, Charles and Aaron (2019). Carry out study on teachers' teaching style and motivational strategies. The purpose of the study was to investigate the teaching styles and motivational strategies of public primary school teachers in the Cape Coast Metropolis. The design for this study was descriptive. The population for this study included all public primary school trained teachers and pupils in the Central Region of Ghana. Two hundred and fifty-five teachers and eighty-seven pupils were sampled from basic schools in Cape Coast in the central region of Ghana. Purposive and stratified random sampling technique were used to select the district and respondents for the study. Data collection was facilitated through the administration of questionnaire. Both teachers and pupils were made to respond twenty-seven (27) close-ended and four open ended questionnaire items for this study. The Pearson Product Moment correlation was used to examine the association between the main variables. The study revealed that the various teaching styles and motivational strategies used by trained teacher makes it easy for them to help boost pupils' academic performance in the various public schools.

#### Learning Styles and Pupils' Academic Performance

Romansyan, (2018). Examined effects of visual learning styles and school climate on students' achievement of learning entrepreneurship. This research is a correlation research that aims to determine whether or not there is effect of visual learning style and school climate on students' achievement of learning. Data collection techniques used questionnaires and then the data was analyzed by using multiple regressions. The analysis showed that there was visual learning style and school climate variables simultaneously have influence of 91% and 9% is influenced by other

variables on entrepreneurship learning achievement. Conclusion from the analysis is there is a high significant of visual learning style and school climate on students achievement of learning entrepreneurship.

Lam Ya & Abdulghani, (2018). Examined the learning style preference among college students', the purpose of this study was to determine what factors other than individual preferences affect undergraduate students' learning style preferences, if learning style is influenced by gender, age, college affiliation and/or type of activities. A total of 185 students from the University of Bahrain, Bahrain, participated in an online VAK (Visual, Aural, and Kinesthetic) for younger people questionnaire. The questionnaire consisted of 16 items about learning style preferences and three about participants' demographics. The results showed that participants generally preferred multi-modular learning style with both kinesthetic and visual learning styling being most preferred while Reading/Writing was the least preferred. Furthermore, there were statistically significant differences between students learning styles based on age and gender, but it was a moderate difference.

#### Gender and Pupils Academic Performance

Research on gender and pupils' academic performance by William, James and Timothy (1997), says that some abilities boys and girls process form a pattern across many cultures and this lead people to believe that an actual difference in cognitive abilities do not exist among the sexes. It is believed that girls talk a lot and it not a surprise to find out that girls excel in verbal fluency. It should be noted that girls have large attention span than boys. Boys in turn are better at solving arithmetic and science problems and a better grasp of spatial relation. Girls are better at motor tasks involving fine co-ordinations, whereas boy are better at tasks required strength. They concluded by saying that the differences noted among girls and boys are as a result of the culture

or educational system, though they appear to be genetically based. Donald (2002) argues that psychologist should be more focused on mental process rather than the gender differences. He says that gender schemas are created through social learning and a multiple of conditioning. Behavior, which is appropriate to the role, will be based on a number of factors, including cultural expectations, norms and stereotype. Cathy (2005) says that sex differences in socialization are associated with an economy that places a high premium on the superior strength and superior development of motor skills required strength, which characterize the male. Gender socialization does not stop at home, but continues in nursery elementary and later in high school and colleges. Fagbemi (2008) , reported no significant difference in the performance of boys and girls on conversation tasks. His research aimed at determined whether there was any significant difference if a group of children were randomly split into two groups and one group manipulated the conversation materials. This was called an “active” group that watched at a distance was called “passive” group. The researcher found out that the overall performance of the two groups was similar. However, he noted that the boys did better under the “active” conditions and girls were superior under the “passive” conditions

Kiminyo (2005), found out that girls tended to perform better than boys in the conversation of weight. He attributed the differences in performance of weight by boys and girls to environmental experiences. His explanation was that girls spent more time during their practical periods at school learning how to cook, which involved measuring difference amounts of ingredients for cooking while boys got involved in activities that do not enhanced acquisition of cognitive abilities of weight. In another study, done in Nairobi by Kiminyo (2008) about conversation of numbers and mass, he found that boys performed slightly better than girls, though the performance was not significant. The explanation given was that the activities and games that boys engage in influence

their slightly better cognitive tasks performance, boys played with sticks, stones, and therefore were likely to develop these concepts earlier than girls.

#### School Types and Pupils' Academic Performance

Better comprehension of the effect of the school characteristics on learning is important because public policy can influence the characteristics of public schools, as well the cost of private schools through vouchers and scholarship. Ibia, (2015) Opined that in addition to educational materials supplied to schools, the setting based on school also influences teaching and learning of the pupils and hence the level of the pupils academic performance. Thus, the specific type of school dictates what is taught, how it is taught and what materials are available. Ibia, further maintained that where educative materials are deprived, pupils suffer from academic deterioration and mental imbalance. Also where the teacher relates positively with the pupils. The school becomes conducive and learners perform well in their academic endeavors.

Alimi, and Alabi (2012), examined the influence of school types and facilities on pupils' skills in Ondo state. It was designed to find out whether facilities and pupils' cognitive skills are related in private and public primary schools respectively. Descriptive survey design was used. Proportionate random sampling technique was used to select 50 schools in Ondo state. Two sets of research instruments school facility descriptive and pupils cognitive skills questionnaire for headmasters; and school facility descriptive questionnaire for the teachers were used for the study. The study revealed a significant differences in facilities available in public and private schools in Ondo state. The study revealed also, there is no significant differences in pupils' cognitive skills of pupils' in the two types of schools.

#### Appraisal of Literature Reviewed

The literature review started with a holistic look at various views and opinion on Gardener theory of Multiple Intelligences which serves the theoretical review that guided the rest of the literature review in particular and the study in general. This was followed by a critical review of the conceptual review such as Concept and objectives of primary Education, Qualities of a Good teacher, The concept of learning styles, Concept of learner centered teaching style, Concept of numeracy , Factors to be considered in the choice of teaching styles.

As children learn through purposeful, critical thinking and sharing experience, they build critical basic skills for academic performance. The literature reviewed however did not establish how the variable of teachers' teaching styles and pupils' learning styles could influence pupils' academic performance. This seeming neglect was what necessitated this study.

On the independent variables of teachers' teaching styles and learning styles, the literature searched was able to situate the review according to authors view on their conceptual meanings, procedures for teaching. However, to give review a broader focus, empirical studies were reviewed so as to determine the extent to which previous findings could be evaluated in relation to the problem of the study stated in chapter one. Several empirical studies were conducted in and out Nigeria educational settings and in other areas such as teachers' teaching styles and students' academic achievement. The researcher discovered that during extensive literature review in teachers' teaching styles and learning styles on pupils' academic performance, most of the researchers found link between teachers' teaching styles and learning styles.

## CHAPTER THREE

### RESEARCH METHODOLOGY

This chapter discusses the method and procedures that was used by the researcher to conduct this study. The chapter is presented under the following subheadings; Research Design, Population, Sample and Sampling Techniques, Research Instrument, Validity and Reliability of the instrument, Procedure for Data collection and Method of Data Analysis.

#### Research Design

The research design that was adopted for the study is Correlational survey research design. This type of research design is appropriate for this research work as it allows the researcher to establish the relationship that naturally occurring variables have with one another. It seeks to establish if two or more variables are related and if so, in what way (Artem, 2020).

#### Population of the Study

The population of this study comprised of all the primary school teachers and pupils in Ilorin West Local Government Area of Kwara State. The total number of primary school pupils in Ilorin West Local Government Area is: 46,219 with 30671 Pupils in Public Primary Schools and 15548 Pupils in Private Primary Schools respectively. The total number of teachers in Ilorin West Local Government Area of Kwara State is: 5156 with 3309 teachers in Private Primary schools and 1847 teachers in public primary schools. (Kwara State Ministry of Education Science and technology and Human Capital Development, 2020).

#### Sample and Sampling Techniques

The total number of 29 schools were used as sample using proportional sampling technique.

Since the school types are already in strata of private and public schools, Proportional sampling techniques was used to select 10% of the population. Ilorin West local Government Area has a total number of 287 primary schools both in public and private. 222 in private and 65 in public. 22 out of the 222 private schools was used as sample while 7 out of the 65 public schools were selected. Twenty nine primary three teachers and the total number of 359 primary three pupils' in their intact class were sampled.

#### Research Instruments

This study use three research instruments which are: Teachers teaching styles questionnaire (TTSQ), pupils learning styles questionnaire (PLSQ), and numeracy achievement test result (NATR).

Teachers Teaching Styles Questionnaire (TTSQ): The instrument was constructed by the researcher to collect information on the influence of teachers teaching styles. The instrument comprises of sections A and B. Section A consists of the demographic data of the respondents such as gender, school type while section B comprises of information on teachers teaching styles.

**TTSQ and consists of 20 items. The items are structured in four point modified likert scale of Strongly Agree, Agree, Strongly Disagree, Disagree.**

**Validity and Reliability of Teachers Teaching Styles Questionnaire (TTSQ):**

**To ensure validity of the TSQ The research instrument was validated by experts in the Department of Early Childhood and Primary Education, Kwara State University, Malete. After which it was given to the researcher's supervisor for approval in which the instruments was subjected to both face and content validity.**

**To ensure that the instrument is consistent, the researcher subjected the questionnaire to trial testing once, using different learners that were not part of the sample. Cronbach Alpha technique was used to establish the reliability coefficients of 0.80**

**Pupils Learning Styles Questionnaire (PLSQ). This instrument was constructed by the researcher to collect information on the influence of pupils learning styles. This instrument comprises of sections A and B. Section A consists of the demographic data of the respondents such as gender, school type, while section B comprises of information on pupils learning styles.**

**(PLSQ) consists of 20 items. The items are structured in scale of sometimes, often, never**

**Validity and reliability Pupils Learning styles questionnaire (PLSQ):**

**To ensure validity of the instrument. The researcher instrument was validated by experts in the Department of Early Childhood and Primary Education, Kwara State University Malete.. After which it was given to the researcher's Supervisor for approval in which the instruments was subjected to both face and content validity.**

**To ensure that the instrument is consistent, the researcher subjected the questionnaire to trial testing once, using different teachers that were not part of the sample. Cronbach Alpha technique was used to establish the reliability coefficients of 0.71**

**Numeracy Achievement Test.** The researcher conducted test based on what the teacher has taught (treated topics) from the teachers lesson note in order to evaluate the topics being taught and the instrument comprises of sections A and B. Section A comprise of the demographic data of the pupils such as gender, school type, while section B comprises of information on treated topics in that term which consists of 10 items on numeracy. The items was structured for both fill in the gap and objectives.

**Validity and Reliability of Numeracy Achievement Test:** To validate the test, copies of the set questions was given to experts in the Department of Early Childhood and Primary Education, Kwara State University, Malete. After which it was given to the researcher's Supervisor for approval in which the instruments was subjected to both face and content validity.

The reliability of the Achievement test was at reliability coefficient of 0.73.

#### **Procedure for Data Collection**

The researcher obtained a letter of introduction from the Head of Department of Early Childhood and Primary Education, Kwara State University Malete which was tendered to the school head of the schools selected for the permission to administer questionnaires and as well conducted and monitored the test exercise which was set from scheme of work. The researcher trained 3 research assistants for two days, first day, the purpose of the study, and how to administer and retrieve the questionnaire on the second day. The researcher and three trained research assistants administered the Instrument that is Questionnaire to the respondents of the sampled schools in Ilorin West Local Government Area of Kwara state in order to gather first-hand information for the study. The exercise was completed for the period of three (3) weeks. The first two weeks was used for administering and retrieval of teaching styles and learning styles instruments from the sampled schools by the researcher and the research assistants. The last week was for the conduct and

marking of test in the sampled schools by the researcher and the research assistants to enhance effectiveness of the exercise.

#### Method of Data Analysis

Data was analyzed using descriptive and inferential statistics. The demographical data was analysed using descriptive statistic of frequency count, percentage and mean while the two research questions were answered using descriptive statistics of frequency count, mean and percentage. All formulated hypotheses were analyzed using inferential statistics of Multiple Regression Analysis and Independent t-test which was tested at 0.05 level of significance. Decision rule for the test hypotheses, the null was retained when the probability value was greater than or equal to 0.05 level of significance. Where the observed probability value was less than 0.05 level of significance, the null hypotheses was rejected.

## CHAPTER FOUR

### DATA ANALYSIS AND RESULTS

This chapter deals with Data Analysis and Results

#### SECTION A: Demographic Analysis

##### Table 1: Distribution of Teachers by School Types

School Types

Female



On Learner centered (WA = 3.04), I allow pupils to compete with others in the classroom (mean = 3.24), I allow pupils to work with different methods (mean = 3.17), I allow pupils to interact with others (mean = 3.17), I allow pupils to learn through discussing their ideas (mean = 3.14), I allow pupils to choose what and how they will learn (mean = 3.07), I allow pupils to ask questions in the classroom (mean = 3.04), I allow pupils to learn at their own pace (mean = 3.00), I allow pupils to work in pairs or small groups (mean = 2.97), I allow pupils to correct their mistakes (mean = 2.93), I allow pupils to move freely in the classroom (mean = 2.66).

Therefore, teacher center is the commonly accepted teaching styles for teaching Numeracy in Ilorin west LGA (Weighted Average = 3.06).

Research Question 2: which learning styles is predominant among pupils in Ilorin west LGA?

Table 5: Predominant Learning Styles among Pupils

S/N

11 I love to talk to myself or others  
when am bored

Therefore, Visual learners is the predominant learning style among pupils in Ilorin west LGA (Weighted Average = 2.31), followed by auditory learners (weighted average = 2.27) and kinesthetic learners (weighted average = 2.21).

#### SECTION C : Testing the Hypotheses

H01: There is no significant composite influence of teaching styles on the academic performance of pupils in Numeracy

Table 6: Multiple Regression Analysis showing the Composite Influence of Teaching Styles on Academic Performance of Pupils in Numeracy

Table 6 shows that there is a composite influence of independent variable (teaching styles) on the dependent variable (performance in numeracy) ( $R = 0.43$ ). This led to the fact that the independent variable accounted for 18.6% of the total variance in the performance of pupils in Numeracy (Adjusted  $R^2 = -0.12$ ). This composite influence is shown not to be significant ( $F(2, 26) = 2.97$ ;  $P > 0.05$ ). Therefore, hypothesis 1 is not rejected.

H 02: There is no significant relative influence of teaching styles on the academic performance of pupils in Numeracy

Table 7: Multiple Regression Analysis showing the Relative Influence of Teaching Styles on Academic Performance of Pupils in Numeracy



H 05: There is no significant difference in the academic performance of pupils in Numeracy based on gender

Table 10: T-test showing Difference Male and Female Pupils Academic Performance in Numeracy

Variable

2. **Visual learners is the predominant learning style among pupils in Ilorin west LGA**
3. **There is no significant composite influence of independent variable (teaching styles) on the dependent variable (performance in numeracy)**
4. **None of the independent variables teacher centered, learner centered have significant relative influence on the dependent variable (performance in Numeracy).**
5. **There is no significant composite influence of independent variable (Learning styles) on the dependent variable (performance in numeracy)**
6. **None of the independent variables visual, audio, kinesthetic have significant relative influence on the dependent variable (performance in Numeracy)**
7. **There is no significant difference in the academic performance of male and female pupils in Numeracy**
8. **There is no significant difference in the academic performance of public and private pupils in Numeracy**

## **CHAPTER FIVE**

### **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

**This chapter focuses on discussion, conclusion and recommendations of the study, limitation to the study and suggestion for further studies.**

#### **Discussion of findings**

**The findings of this study revealed that there is no significant composite influence of teaching styles on the academic performance of pupils in Numeracy in Ilorin west Local Government Area of Kwara State, therefore the hypothesis is not rejected. The finding is not supported by a similar study carried out by Adeoti and Olufunke (2016) which established a significant relationship between teachers teaching styles and students academic performance. The study also found a significant relationship between teachers' qualification, experience and students academic performance.**

Another finding of the study revealed that there is no significant composite influence of learning styles on the academic performance of pupils in numeracy in Ilorin West LGA, therefore the hypothesis is not rejected. This disagrees with the study conducted by Dalmolin et'al (2018), which revealed that there was a connection between learning styles and academic performance of students. It is also in line with the finding of Magulod,(2019) who found a significant relationship between learning styles and academic performance of students. In another development, Barman et'al study also confirmed the findings of this study by concluded that student knowledge of their learning style can improve their academic performance.

Furthermore, the findings revealed that there is no significant difference in the academic performance of public and private pupils in Numeracy in Ilorin West local Government, therefore the hypothesis is not rejected. The findings of this study does not agree with the study of Adeyemi, (2014) which revealed that pupils in private primary schools performed better than their counterparts in the public schools and call for improvement in the public schools to enhance the learning opportunities of the vast majority of pupils attending the public schools.

The findings of the study revealed that there is no significant difference in the academic performance of male and female pupils in Numeracy in Ilorin West Local Government Area, therefore the hypothesis is not rejected. The result of this study disagree with Adeneye (2011), that revealed that there is a significant differences in the Numeracy performance of male and female students. It states that male students performed better than their female counterparts in numeracy due to strategies employed to solve numerical tasks, research evidence indicates that boys are more favorably disposed to use abstract strategies in solving numerical problems while girls were more actively engaged in the use of concrete methods. John (2015) explained that students' achievements are not dependent on gender but function of method. According to John, both sexes

are capable of collaborating and competing in classroom activities. The study therefore suggests the need to give boys and girls exactly the same opportunities and challenges in the numeracy class as for them to compete, collaborate and gain from one another.

Another findings of the study revealed that teacher center is the commonly accepted teaching styles for teaching Numeracy in Ilorin west Local Government. The result is in line with (Ekwueme,Popoola,& Orin, 2012) which emphasized that the teacher centered teaching style has been widely used from year to year as a primary method of transmitting information to learners. The approach as revealed in their findings encourages rote learning and failed to motivate the students' interest and achievement in their academics.

While another finding revealed that visual learning style is predominant among pupils in Ilorin West Local Government Area. The result of the findings is against that of (Chiason,Aigba & Jimin 2015) which revealed that auditory learning style was predominant among the three learning style with a mean score of 3.8105 which is greater than the visual by 0.1084 and tactile by 0.1052.

## Conclusion

Based on the findings of the study, it was revealed that teacher centered teaching styles is commonly adopted in the teaching of Numeracy in Ilorin West Local Government Area of Kwara State; this implies that pupils' were not given the opportunity to actively engage in their learning. If this trend continues, pupils' will continue to perform poorly in the subject. It can be established that there is no significant composite influence of teaching and learning styles on pupils' academic performance in Numeracy in Ilorin West Local Government Area of Kwara State and visual learning style is the predominant learning style among pupils' in Ilorin West Local Government Area of Kwara State. It is also concluded that there is no significant difference in the academic

performance of male and female pupils' in Numeracy and no significant difference occur in the academic performance of public and private pupils' in Numeracy.

### Recommendations

Based on the findings of this study, the following recommendations were made:

1. Both private and public School Teachers should adopt the use of learner centered approach such as hands on activities, problem based learning in the teaching and learning of Numeracy.
2. Teachers should be sensitive to pupils' different learning styles such as Visual, Auditory and Kinaesthetic so as to ensure effective pedagogy during teaching and learning.
3. Teachers' should be encouraged to attend seminars, training and workshops so as to keep them abreast of new and more effective teaching styles..
4. Teachers should create an atmosphere conducive to learning in order to enhance the development of pupils' learning experiences.
5. School administrators should provide learning resources that covers all learning styles.

### Limitations to the Study

In the process of carrying out this research, the researcher is still aware of its limitations among such constraints was that the study was carried out in only one local Government Areas out of the sixteen Local Government in Kwara State. Twenty nine schools were also considered out of the existing 287 primary schools in the local government Area which may limit the generalization of the result. Also school location( rural and urban ) was not captured in the research work as the study was carried out in only primary schools in urban area.

#### Suggestions for further Studies

The following suggestions for further studies were made:

1. This study should be carried out in primary school in other local Government Areas of Kwara State and other parts of Nigeria so as to generate another findings on the existing Results
2. The study can also be replicated in rural Area, or rural and urban as this study only focused on primary schools in urban areas.
3. Future researchers can also increase the number of schools to be more than 29.

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KWARA STATE UNIVERSITY MALETE, COLLEGE OF EDUCATION  
DEPARTMENT OF EARLY CHILDHOOD AND PRIMARY EDUCATION  
LEARNING STYLES QUESTIONNAIRE (LSQ)

DEAR RESPONDENTS,

This questionnaire is meant to elicit information on the different learning styles that are employed by the pupils in primary schools in Ilorin West Local Government Area of Kwara State.

It is meant for research purposes only. All information supplied will be treated with utmost confidentiality.

Rahmat Nasamu

Yours faithfully

DEMOGRAPHIC INFORMATION OF THE SCHOOL

SCHOOL TYPE:            PRIVATE ( )            PUBLIC ( )

PUPILS GENDER:        MALE ( )            FEMALE ( )

S/N

12 I follow oral direction better

**DEMOGRAPHIC INFORMATION OF THE SCHOOL**

**SCHOOL TYPE:**

**TEACHERS GENDER:      MALE ( )                  FEMALE ( )**

**TEACHERS QUALIFICATION: N.C.E ( ) B.ED ( ) PGDE ( ), M. ED ( ), OTHERS ( )**

**S/N**

**SA   A   D   SD**

## LEARNER CENTERED TEACHING STYLE

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