

**EFFECTS OF CONCEPT MAPPING STRATEGY ON ACHIEVEMENT
AND LEARNING RETENTION IN SOCIAL STUDIES AMONG
JUNIOR SECONDARY SCHOOL STUDENTS IN KANO
MUNICIPAL, KANO STATE, NIGERIA**

BY

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DECLARATION

I hereby declare that this dissertation titled “Effects of Concept Mapping Strategy on Achievement and Learning Retention in Social Studies Among Junior Secondary School Students in Kano Municipal” is the product of my research efforts under the supervision of Dr. Halima Rabi Abdullahi. No part or whole of this dissertation has been presented elsewhere for the award of a Degree or Certificate. Information in the text have been duly acknowledged in accordance with American Psychological Association (APA) standard.

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CERTIFICATION

This is to certify that the research work for this dissertation titled “Effects of concept mapping strategy on achievement and learning retention in social studies among junior secondary school students in Kano municipal” by Sanusi Tanko Bala (SPS/14/MED/00183) was carried out under my supervision

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Abstract

The study examined the effects of concept mapping strategy on achievement and learning retention in social studies among Junior Secondary School students in Kano Municipal, Kano State, Nigeria. Five Specific Objectives from which five research questions and five corresponding hypotheses were formulated for the study. The design of the study was Quasi-experimental pretest posttest design. All JSS II social studies Students in Kano Municipal Zonal Educational directorate constituted the population of the study and six JSS Schools (3 boys and 3 girls) were randomly selected using balloting method from the directorate, while two intact classes of JSS II were selected in each school and converted into control and experimental group. A total of 438 students participated in the study broken down as 226 boys and 213 girls in the six selected schools. Instruments used for data collection were social studies Academic Achievement test and social studies learning retention test, which were developed by the researcher and validated by an expert in Social Studies, the researcher's supervisor and some social studies teaching staff. While social studies achievement test was a multiple choice objective, social studies learning retention test was fill in the blank. Reliability coefficient of 0.75 and 0.70 were attained after test piloting the two instruments using Pearson product movement correlation (PPMC) statistical technique. Two sets of data, pretest and posttest were collected from two groups of students control and experimental involved in the experiment. Data collected were analyzed using mean and standard deviation for the research questions and t-test statistical technique for the hypotheses at 0.05 level of significance. The findings of the study revealed that students taught social studies using concept mapping instructional strategy achieved higher than those taught the subject using lecture method. It also revealed that student's performance was enhance when they were taught via concept mapping instructional strategy. To this regard, teachers need to use concept mapping instructional strategy so as to improve the academic performance and retention of learning among their students.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Education has been described as a vital and indispensable key to any form of development, it is a lifelong process which transforms the life of an individual from that of a helpless and dependent person to self – reliant, rationale and skillful person who can contribute to the development of his society. It is also the aggregate of all means by which human beings developed necessary skills, values and attitudes that are socially acceptable (Offiah and Achufusi, 2010).

Education is also globally recognized as the bedrock of individual and national development changes are most often affected through the educational system of a nation involving reforms programs and curriculum development (Lawal, 2008). Education is, indeed, a vehicle for effective social change and an instrument for economic, political and scientific development of any nation (Olarinoye 2001 and Otuka, 2016). This could be the reason why the federal government of Nigeria emphasizes the teaching of social studies in its national policy of education (FGN,2008). Social studies education is very strategic and important to Junior Secondary Education. The philosophical and psychological bases for the introduction of social studies reflect the national goals and objectives in the National Policy on Education. The Nigeria national policy on education has given an important place to social studies education. The policy regards social studies as a subject which all students of JSS cannot dispense within their learning activities.

Social studies curriculum in Nigeria has special tasks to perform in transforming Nigeria into a modern state. These including healing the social and political wounds of the past decades, nurturing the most recent hopes of good ethnic group relationship and nationalism and

engendering constructive reform to make the nation a just and progressive society. It will also help to promote the desire for self – reliance, national efficiency, and national task. Social studies adopts the systems approach to identify, study, analyse and suggest solution to human problems in the multi facet environment. Its basic function is to facilitate, among the learners the inculcation of desirable social habits, healthy attitudes and sound moral values. Employment of requisite methods or approaches in the teaching of social studies require that a teacher selects and organizes instructions around fundamental questions, topics or social problem and explores wide range of learning experiences in order to stimulate the learning situation and to achieve success.

Most social studies teachers in Nigeria, seems to ignore the fact the reason for the existence of their subject is meant to capitalize on and explore the process of bringing various concepts and methods or variety of forms of knowledge to bear on the study of human problems for comprehensive analysis and understanding. These teachers emphasized the use of traditional methods, which have proved ineffective in getting pupils to adequately understand the interaction of man and his environment for the purpose of coping effectively with the problems arising thereof. It has been observed that the major challenges in teaching is to create experience that involve the student and the support of his own thinking, explanation, evaluation, communication and application of scientific models needed to make sense of these experiences (Afolabi and Akinbobola, 2009).

In Social Studies Education, there is an increasing awareness of the importance of learner centeredness in a teaching-learning situation. This has generated a lot of attention in relation to understanding how learners learn and how to help them learn about concept in the subject.

It is worrisome to note that students at this level continue to perform below expectations and the results continue to fluctuate over the years.

The fluctuation of results was attributed to the use of inappropriate methods of teaching. There is, therefore, the need to identify teaching methods that can enable students to relate with, share ideas and interact academically among themselves. It is in the light of this documentations and observation above in the decline in students' performance in the subject that this research work was under taken.

Social Studies curriculum is based on integrated concept, and methodologies. It focuses on problems of human survival in the process of environmental interaction taking into consideration all conceivable factors and problems: Social, Scientific, religious, technological, economic and psychological among others. Consequently social studies adopts the systems approach to identify study analyse and suggest solutions to human problems in the multifaceted environment. To implement social studies curriculum effectively we should discard the common practice of imparting bare facts and employ appropriate steps to famirilize the teachers of social studies with the right methodology of the discipline. The attainment of the goal of social studies education is a major concern of education policy makers and of such goals, is raise a generation of people who can think for themselves, respect the dignity of labour, appropriate these values specified under our broad national goals and live as good citizens. Since realization of this goal lay in schools especially secondary schools, the use of innovative teaching methods become very imperative.

1.2 Statement of the Problem

There has been so much concern and complaints from almost all quarters of the Nigeria society that the standard of education has fallen (Baikie, 2002). Students performance in both Junior

and Senior Schools continues to deteriorate over the years. This poor performance is being blamed on several factors. One of such arguments is the use of inappropriate teaching method by the teachers.

The performance of students on social studies examinations has not been encouraging. Social studies educators have expressed concern about the decline in students academic performance in the subject and had attributed this partly to inappropriate utilization of teaching techniques or strategies.

There are number of empirical researches that were conducted but they focused on effect of instructional strategies on student academic performance in science and art disregarding social studies and couple with this, is the very little empirical research on the effectiveness of concept mapping in teaching social studies. It is against this background that there is need for indepth research towards improving social studies teaching in Nigerian Junior Secondary Schools.

1.3 Objectives of the study

This study sought to:

1. Investigate the effect of concept mapping strategy in achievement in social studies among Junior Secondary schools students in Kano Municipal.
2. Determine the learning retention level of students who were taught social studies using concept mapping strategy in Kano Municipal.
3. Explore if there is difference in achievement between male and female who were taught social studies using concept mapping, in Kano Municipal
4. Find out if there is a difference in learning retention between male and female students who were taught social studies using concept mapping strategy in Kano municipal.

5. Determine if there is a difference in achievement between students from high socio-economic status and those from low socio-economic status who were taught social studies using concept mapping strategy in Kano Municipal.

1.4 Research Questions

The study was guided by the following questions:

1. What is the effect of concept mapping strategy on achievement in social studies among Junior Secondary schools students in Kano Municipal?
2. What is the retention level of students who were taught social studies using concept mapping strategy?
3. Is there any difference in achievement between male and female students who were taught social studies using concept mapping strategy in Kano municipal?
4. Is there any difference in retention level between male and female students who were taught social studies using concept mapping strategy in Kano municipal?
5. Is there any difference in achievement between students from high socio economic status and those from low socio economic status who were taught social studies using concept mapping strategy in Kano Municipal?

1.5 Hypotheses

Based on the research questions, this study tested the following null hypotheses:

2. There is no significant relationship in achievement among Junior secondary school students of Kano Municipal who were taught social studies using concept mapping strategy.
2. There is no significant relationship in retention level among Junior Secondary student of Kano Municipal who were taught social studies using concept mapping strategy.

3. There is no significant difference in achievement between male and female student Junior Secondary schools students of Kano municipal who where taught social studies using concept mapping strategy
4. There is no significant difference in learning retention level between male and female Junior secondary school students of Kano Municipal who were taught social studies using concept mapping strategy.
5. There is no significance difference in achievement between studies from high socio economic status and those from low socio economic status who were taught social studies using concept mapping strategy.

1.6 Significance of the study

The findings from this study is expected to be of relevance to: Teachers, Curriculum planners, researchers, students policy makers and Authors.

The findings of this study would provide social studies teachers with some insights into the instructional strategy that would significantly improve students performance. Teacher educations programme would greatly benefit from this study because teacher could derive pedagogical abilities and skills to adopt in order to teach meaningfully. The findings would be useful in improving teachers abilities in teaching of social studies.

For curriculum planners and developers, the study findings would guide them in innovations that are related to instructional strategy. The study would provide a window in planning and proper implementation of social studies curriculum.

The findings of this study would be of immense help to future researchers in social studies education. The result would provide direction for subsequent researchers in channelling resources in relation to teaching strategies in social studies. More importantly, the findings would serve as useful reference point to subsequent research work.

It will benefit students as the use of this method will give them the opportunity to identify problems, develop critical and imaginative thinking and hence make self directed learning.

For policy makers, the study would among others provide a framework for organizing seminars and workshops for teachers in the use of variety of instructional methods in the teaching of social studies. The study would provide base line data to various Education Resources Department (ERD) and other similar department for the proper implementation of social studies curriculum. It would assist in developing appropriate training programme for both preservice and service teachers.

Writer of social studies text books would also benefit from this study, as its findings will guide and provide assistance in planning and writing social studies text books.

1.7 Scope and Delimitation of the Study:

The study covered some selected public Junior Secondary Schools in Municipal Zonal Educational Directorate which consists of Municipal local government and Tarauni Local Government Area of Kano State. The selected level was JSSII Social Studies students within the zones and limited to some selected topics to JSSII Social Studies syllabus. These topics were transportation, communications, and marriage system in Nigeria. The study is restricted to public Junior Secondary Schools in the zone. Six public schools 3 girls and 3 boys participated in the study. Private schools, voluntary, islamiyya and Tsangaya schools are excluded in the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter discusses the conceptual and theoretical framework. The review focuses on concept mapping, typologies of concept mapping, achievement, learning retention and social studies. Piagetian cognitive development theory forms the basis for the theoretical framework in this study. Furthermore, numerous empirical studies relevant to this current study have been reviewed. A summary and the gap which this study intends to fill constitute the final segment of this chapter.

2.2. Conceptual Framework

2.2.1. Concept Mapping

Concept mapping is a teaching technique that allows students to understand the relationship between ideas, by creating visual maps of the connection. It is a meta – cognitive tool developed by Novak and a team of researchers from Cornell University in 1972 (Asiyal, 2005). The development of this strategy was based on Ausebel’s Assimilation theory which states that for meaningful learning to occur the students must incorporate new information into the existing cognitive structure.

Ausebel theory states that for learning to occur the learning materials should be conceptually clear and presented with language and examples relatable to the student’s existing knowledge framework so as to enrich the students’ existing conception and ideas. The substantive and organizational properties of the cognitive structure have a crucial influence of both accuracy and clarity of emerging new meaning and on a person’s immediate and long term ability to retrieve

information. The better the students' knowledge is organized, structured or corrected, the more effectively it can be assessed when needed. The more concepts the student's acquired the more interconnections and cross links students' can make between them. This result in the students' having a richly connected and finely integrated conceptual framework for meaningful learning.

Concept mapping relates directly to such theoretical principles as prior knowledge, subsumption, cognitive bridging and integrative reconciliation. Concept mapping was developed based on theoretical foundations laid down by educational psychologists. The underlining base of the theory is that meaningful human learning occurs when new knowledge is consciously and purposely linked to an existing framework of prior knowledge. Cognitive theories emphasize the human minds as an active and individual processor of information. They focus on the human mind's active attempt to make sense of the whole. Conceptual clarity leads to indicator that may assist the students in altering his/her existing knowledge structure in the light of new information. Concepts are powerful building blocks for the meaningful construction of knowledge. The concept theorist holds the belief that the teacher is a facilitator, who creates the environment to make it possible for students to learn. They view learning as a mental process of mental communication. Concept mapping is a strategy that helps learners to organize their cognitive frameworks into more powerful integrated patterns. Concept mapping, according to Novak and Godwin (1984), is a schematic device for representing a set of concept meaning, embedded in a hierarchical diagram that illustrate the interconnection between and among concepts.

Bayerback and smith (1990), haz and Tomir, (1990) observed that concept mapping has become a viable educational medium that can help teachers become more effective in imparting knowledge to students. From the previous studies, it has been confirmed that concept mapping,

as an instructional strategy, had enhanced students' academic performance and learning retention. Concept mapping can be useful in instructional delivery in the classroom since the process produces the formal steps by steps visual representation of concepts and ideas.

Wikipedia (2008) mentioned that concept mapping can be used to:

1. Develop the understanding of a body of knowledge
2. Explore new information and relationships
3. Access prior knowledge
4. Gather new knowledge and information
5. Share knowledge and information generated
6. Problems solving options

Social studies is a subject that organizes its contents around relevant knowledge, values and skills that constitute the wide sphere of man. It emphasizes cognitive and prior knowledge in its teaching and learning. When discussed in a group and combined with feedback on the maps provided by the instructor, concept mapping faster students' learning and enhances performance.

2.2.1(i). Typology of concept mapping

1. **Spider Concept Mapping:** Is a kind of mapping that is used to investigate and enumerate various aspect of a single theme or topic. It helps students to organizes their thoughts. Activally radiating sub – themes surround the centre of the map. It looks a bit like a spiders web, as its name suggest.

2. **The hierarchy concept mapping:** Presents information in a descending order of importance step by step the students noted down the relevant context in the given boxes circles. It helps to understand and co-related the subject.

3. **The Flow – Chart Concept Mapping:** This organize information in a linear format.

4. **System concept mapping:** This organizes information in a format. It includes all data on the mapping and slows many relationship between the data uses critical thinking shalls along with problems solving skills.

2.2.2 Academic Performance

Academic persomance refers to students achievement in topic taught base on the stated objectives. The use of appropriate teaching methods by the teacher helps to achieve this goal. Edinyag (2012) defines academic performance as the outcome of education which reveals the extent to which a student, teacher or institution have achieved their educational goals. Academic performance or achievement is commonly measured by examination or continuous assessment (Abdulhamid, 2013). The objectives of teaching social studies in our Junior Secondary School can only be achieved through effective instructions. Successful teaching of social studies does not depend only on the teacher’s mastery of the subject matter but also the teaching method employed. Academic achievement is also seen as the ability to demonstrate accomplishment of academic goals for which learning experiences were designed. Achievement is an important academic factor that has been indentified to be influence by teaching method. Previous studies (Ige 2009) and opera 2011) indicated that teaching methods influence students academic achievement.

Achievement means those knowledge, skills and understanding which result from a particular course in school. Achievement represents specific learning, Academic achievement of students refers to progress students make in school as measured by scores (Eze Kannah 2007), Adeyemi, 2008), describes academic performance as the scholastic standing of students at a given moment which states individual intellectual abilities. Academic achievement is based on the degree of intellectual stimulation that the child could receive from learning situation, (Obeka, 2009), According to Blaiv, (2000) to achieve is to accomplish or gain by efforts or do something successful with effort and skills Love (1973) in Okafor (2000) on the other hand maintained that academic achievement concerns with mental care. According to him mental health has its basis, physical health, and intellectual skills which lead to satisfactory means of adjustment, social sensitivity and adequate self concept.

2.2.3 Learning Retention

Retention is the ability to preserve and later remember information or knowledge gained after learning, (Bichi, 2003). It takes place when learning is coded into memory. Thus, appropriate coding of incoming information provides the index that may be consulted so that retention takes place without an elaborate search in the memory store (Oyedokun 2000). The nature of the material to be coded contributes to the load of retention materials related to the quality of retention in terms of their meaningfulness, familiarizations, correctness and image involving characteristics (Adeniyi, 2004).

A retention interval is the time that elapses between a test of original learning and that of a retention test, thus knowledge retention is defined as the proportion of knowledge retained by an

individual after a specific retention interval. Research has in general proposed three main principles pertaining to knowledge retention.

Firstly, learning retention falls to 75 – 89% of its original level after a relatively short period of time. Secondly, retention rate decreases over time as a finding of the length of retention interval in a relatively linear manner. Thirdly all performances regardless of their individual levels of achievement have a similar knowledge retention rates.

Many researchers have investigated and defined several variables that affect learning retention. According to Obeka (2010) they include the type and content of table to be learned, the amount of original learning, the instructional strategy used, the length of the retention internal and subject individual. Retention is generally affected by two very important variables (1) duration of study session (2) the temporal distribution of study time across the session.

2.2.4 Classification of Instructional Strategies

2.2.4i. Lecture Method

The lecture method of instruction is one of the several teaching methods available in the teaching and learning process. Usually, the lecturer will stand at the front of the room and recite information relevant to the lecture content. It is a teaching method where an instructor is the central focus of information transfer. Lecture method is oral presentations intended to present information or teach people about a particular subject. Typically, an instructor will stand before a class and present information for student to learn. Sometimes, lecturer writes on board or uses an over-headed projector to provide visuals for students. Students are expected to take notes while listening to the lecture. Lecturer method of teaching is the oldest teaching method applied in educational institutions. It is a pedagogical method in which the teacher formally delivers a

carefully planned exploratory address on some particular topics or problems. Lecturers are used to convey equations. Lecture, as a teaching method, generally incorporates additional activities, e.g. writing on a chalk board, exercise, class questions and discussion or student presentation. The use of multi – media presentation software such as Microsoft Power Point has changed the form of lecture.

Lecture method represent a conception of education in which teachers who know give the knowledge to students who do not and are, therefore, supposed to have nothing worth contributing. The lecture method of teaching allows quick exposure to new materials, greater teacher context in the classroom and also facilitate large class communication. Good and Merkel (1959) defined lecture method as a method of teaching through which the instructor gives the oral presentation of facts or principles to learners and the class becomes responsible for note taking. This method provides a little chance of participation by such means as questioning or discussion during class period. Howe (1980) gave the same definitions as lecture occurs whenever a teacher is talking and students is listening. According to Perrot (1982), in almost all lessons on learning sequences, the teacher has to present information and ideas. He has to introduce topics, summarize the main points of learning activities and stimulate further learning. All these activities requires the use of lecture method technique. The lecturer method is the traditional style of teaching still found in many schools and colleges.

Brown (1987) has suggested four main features of lecture method:

1. **Intention:** The lecturer's intention may be considered to provide coverage of a topic to generate understanding and to stimulate interest.

2. **Transmission:** A lecture sends a message verbally, extra verbally and none – verbally to the learner.. the verbal messages may consist of definitions, descriptions, examples, explanations and commends. The extra verbal component is the lecturer’s vocal qualities, while none – verbal component consist of the lecture questions and facial expressions.
3. **Receipt Information:** The information, meaning and attitudes conveyed by the lecturer may or not be perceived by the students. Attention fluctuates through the process of lecture. The attention of students can be increased if the lecture includes some short activities for students such as brief small group discussion or simple problem solving.
4. **Out – Put –** Any instructional strategy should lead directly to the objective and interrelated goals of study. Gropper (1979). So, the students’ response or output is very essential in the process of lecturing.

In social studies teaching, concepts like faith, Belief, Justice, Citizenship, etc. are better taught using the lecture method. This method can be used where there is shortage of accommodation and personnel to cater for a large population.

Social studies is a core course in Nigerian basic and Junior secondary schools and its importance is in its capacity to help learners understand other descriptive subjects such as history, geography, economics etc. at the senior secondary level. Furthermore, social studies, by its very nature, cannot be isolated from our daily lives. The subject revolves around our social, political and economic lives. Hence, a solid foundation needs to be laid down for its teaching. Effective citizenship education relies on the effective teaching and learning of Social Studies. Empirical evidence indicate that teaching strategies have significant effect on the achievement, interest and retention of students. Poor and ineffective strategies can be the

major factors responsible for the recorded poor achievement in Social Studies Education in Junior Secondary Schools.

2.2.4ii Discovery method

Discovery method most often refers to pedagogy that exposes student to various situations, questions, or tasks that allow them to discover for themselves the intended concepts of material (Wilke and Straits 2001). Learning occurs when the learner constructs an understanding of newly discovered information by associating it with prior knowledge in an organized and systematic way. Discovery method is characterized by the learner playing an active role in organizing the material to be learned. The method focuses on the students discovering what is to be learned without being given the explicit information on contents by the teacher (Ajewole, 1987; Blake, 1983; Caprio and Micikas 1998; Davies 2003). UNESCO defined discovery as a teaching style where the learner, with minimum guidance from the teacher seeks to discover and create answer to a recognized problem by defining a problem, formulating hypothesis, gathering data, reporting findings, formulating conclusion and stating one's comment or applying the conclusions.

Discovery learning has long been advocated as a means for instruction at elementary and secondary school (NCSS, 1994). Within this context, it is viewed as an alternative means of improving student achievement and developing social studies by directly involving students in the learning process.

2.2.4iii Discussion Method

Discussion method supplies information on a topic from various points of view by learners themselves while the teacher acts the role of the moderator rather than dispensing or

communicating knowledge. Speaking, listening and observing are the essential attributes of a discussion method.

The method is designed to develop group agreement through task and reflective thinking. Its aims are to stimulate analysis, encourage interpretation, develop or change attitude. It is a valuable means of providing the participant with information possessed by other members of the group. Discussion method is students centered and it is based on the philosophy that knowledge arises within the person and not from any external sources (Wilens and White 1991).

The many different definition of discussion as a learning tool include three basic elements (a) a group of people (b) brought together for face to face oral communication and (c) to share knowledge or make decision.

2.2.4.iv Classroom Discussion

This is the most common type of collaborate method of teaching. A discussion taking place in a classroom can be either facilitate by a teacher or by a student. A discussion could also follow a presentation or a demonstration. Class discussion can enhance student understanding add context, broaden student perspective, reinforce knowledge and build confidence.

2.2.5.i Concept of Social Studies

The concept of social studies denotes the idea and the general notion underlying the course. Social Studies is a subject that helps the individual to be useful to the society and to appreciate the current cultural practices in order to be acceptable by the immediate and larger society. According to Kissock (1989 1:3), Social Studies is a program of studies which a

society uses to instill in students' knowledge, Skills, attitude and actions which it considers important concerning the relationship human beings have with each other, their world and themselves. Adekaye (1982:6), in Onipe (2004), defines Social Studies as a subject which teaches pupils self – awareness and inculcates self – discipline, self – reliance, self – service in them. This in turn develops sound mind in a sound body capable of dealing with stress and strains of life. Social Studies is a body of knowledge which looks at the whole parts of educational enterprises from the social perspective. The subject is concerned with the study of man and his completed relationship with his environment.

The conceptualization of social Studies, according to Ololobou (1991:2) in Onipe (2004), in an organized integrated study of man and his environment both physical and social, emphasizing on cognition, functional skills and desirable attitudes and actions for the purpose of producing an effective citizen.

Social studies is a study of problems in an environment and how to find solutions to them. It is a multidisciplinary study of topic, a problem, issues, a concern or an aspiration. (Gind, 2000:4). In the opinion of Ndam (2000), in Ololobou (2000:239), Social Studies Education has developed a variety of strategies and techniques to bring about personal development of attitude and values in a citizen. Social Studies as perceived by Sunal et al (2002:10), is the integrated study of the social sciences and humanities to promote civic competence. Social Studies Education helps an individual to examine and re-examine one's views and stand on the various unresolved societal issues. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decision for living (Sunal et al 2002:10). The course critically views how man manipulates and is manipulated by various environmental factors around him. According to Akinyele (1988:7) in Onipe (2004:19),

Social Studies involves the study of the basic characteristics of man and the area in which he lives, and his relationship with other men.

Generally, through social Studies, a fundamental process of increasing the wisdom of Human beings, the adults of the future, their understanding and tolerance of others can be developed. Social studies in schools helps individual learners to cope with the increasing complexity of social relationship.

2.2.5ii The nature of social studies

Social Studies, as subject of study, consist of facts, concepts and generalization from the social science discipline. Social studies is made up of integrated concepts, problem solving strategies, citizenship education and decision making process. Social studies is of prime relevance in the inculcation of citizenship and social values. Sunal and Hass (2002:10), in Onipe (2004:20), posited that the defining characteristics of social Studies are that it is multi – disciplinary in nature encompassing and integrating knowledge and process from many disciplines.

Sunal et al. (2002:10), in Onipe (2004:20), also maintained that within the school programs, social studies provides coordination and systematic study drawing upon such disciplines as Anthropology, Economics, geography, history, Law, Philosophy and Religion.

Ololobou (2004), in Onipe (2004:20), states that the nature of Social Studies can be summarized as promote:

1. Cognition
2. Functional skills and

3. Desirable attitudes and actions.
1. **Cognition:** That is knowledge, comprehension or understanding and evaluation as relevant to physical and socio – cultural environment constituents which includes earth material relief features, atmospheric processes, water bodies, the cover and man’s material and non – material cultures respectively.
2. **Functional Skills:** The acquisition of which make the individual more productive and effective in mapping self and relating with the physical, social, economic and political environments.
3. **Desirable attitudes and actions:** such attitudes and actions are supportive of the development process. They include honesty, patriotism, truthfulness, punctuality, peaceful co-existing, wise use of resources, etc. Social Studies, Thus seeks to make the individual a well – equipped efficient and effective citizen.

2.2.5.iii The scope of social studies

This entails the depth of the study that is undertaken on each topic at a particular level. The broad framework of Social Studies program is usually created to include the desired components. The African Social and Environmental Studies Program (ASESP) (1994:15) described the scope of Social Studies as the depth of study for example, how deep or extensive are going to study a particular concept of a topic? In ASEP, (1994:15) the scope of Social Studies is stated as follows:

The scope of Social Studies is concerned with the breadth, coverage, content, quantity and quality of the subject based on the concept, terms, themes drawn from history, sociology, geography, economics, civic, political and physical science, social studies seek to integrate the

theories of social science subject in order to gain the wider understanding and perspective of man and his problem of living.

The scope of social studies in the Junior Secondary school curriculum in Nigeria centers on human beings and environment and draws its content from disciplines like Anthropology, geography, history and political science and so on. Social studies is an aspect of social science education that deals with totality of man's activities within his/her physical, social and political environments. Esu and Inyang (2009) asserted that Social Studies is currently conceived as an integrated study of man and the outcome of interaction with the environment. The scope of Social Studies in Junior Secondary schools is designed to help students acquired the desirable social and civic behaviours in the course of studying the subject and above all, develop and promote critical thinking. That is why Ololobou (2010) sees social Studies education as an integrated study of human beings as he/she buttles for survival in the environment for the purpose of promoting awareness, appreciation and the understanding of the reciprocal relationship between human beings and the environment.

2.3 Theoretical Framework

This study is guided on Piaget's theory of cognitive functioning development. The major principle of Cognitive Functioning theory is that learning is attain through construction (Piaget, 1970). This theory suggests that human knowledge is innate and that it is directly shaped by experience. The theory sees learning as occurring based on interaction between what the learner already know and the physical environment. The basic principle of this theory which is creating knowledge through interaction between the learner and the environment perfectly agrees with the

fundamental structures of concept mapping, which emphasize active participation in lesson through physical activities and mental engagement.

Piaget was basically interested in how children develop learning and reasoning abilities. This development is constantly changing and depends on the individual and his or her interaction with the environment.

Piaget uses the term structure to describe the individuals understanding and perception of the world she/she has experienced. He believed that upon receiving new stimuli, the individual assimilate them and in so doing attempt to give meaning within his existing knowledge structure.

One of the application of Piagets theory to social studies teaching is that the teachers should be conscious of the development level of the learner and accurately adopt his instruction to the learners capabilities. This theoretical framework can be utilized to develop maps which can be used as a facilitative tool in teaching social studies.

2.4 Review of Empirical Studies.

Some studies on the effects of concept mapping when used as an instructional tool for teaching and learning indicated its relevance in improving the cognitive aspects of learning. A study conducted by Ajuja (2011) to determine the effects of concept mapping as a study shell on student's achievement in biology. The design of the study was quasi – experimental pre-test post-test to compare the means test scores of 120 JSS II students (60 males and 60 female) sampled from 1400 students on Ibadan Municipality. The study used T-test to analyze the hypothesis. The major findings of this study indicated a significant and consist an improvement

in biology. Also students who used concept mapping as a study skills retained biological knowledge longer than those who used other methods.

Martins, Omole, Guga and Yusif (2016) conducted a research to find out the effects of concept mapping and experimental techniques in teaching biology in secondary school in federal capital territory, Abuja Nigeria. The objective of the study was to compare the mean performance scores of students taught Biology using concept mapping, experiments and lecture method. The design of the study was quasi – experimental pre- test post-test control group design. The population of the study consisted of 6208 SS2 biology students of the federal capital territory from which 192 were selected from each three schools within Tashi Zone of Abuja Municipality Area council. The instruments used for data collection were Biology achievement test pretest and posttest (BAT), Biology achievement retention scale towards Biology Questionnaire. The research used 2 weeks of instruction., while the null hypotheses were analyzed using two simple t-test, covariance Analysis (ANCOVA) and Paired comparison at 0.05 alpha level of significance. The findings of the study showed that the use of experiments in teaching significantly improved the performance of students in Biology more than the use of concept mapping and lecture method.

Obianor (2007) provided two opposing views on how concept mapping affects students of different sizes. He studied the interactional effects between concept mapping and gender on achievement in chemistry, found that the male students significantly outperformed the female in achievement test administered. The study involved 61 from SS three students divided into groups. One Group consisted of 30 student in the control group, while 31 student were in the treatment group. The study used ANOVA as a statistical tool to analyze data obtained for the study. Obianor (2007) found that there was no significant difference in achievement between

male and female taught with concept mapping. Markwo and Lonning (2008) investigated the use of student's constructed maps and the effects the maps had on student's conceptual understanding of chemistry. They found that learning was enhanced and the construction concept mapping did help students understand the concept in the experiment they performed. The study adopted Quasi – experimental design and the population of the study consist of 1800 senior secondary 2 chemistry students in 20 senior secondary schools in Portharcourt Rivers local Government of Rivers State. 100 senior secondary 2 chemistry students comprising of 47 male and 53 female students of intact classes in the selected schools formed the samples spearman's Ranking order correlation coefficient, mean, standard deviation and T- test of independent samples were the statistical tools used for data analysis.

Novak (2007) reported that the early study of concept mapping as an instructional strategy was conducted by Moreira (2008). In the study, the researcher modified a syllabus for a college physics course on electricity and magnetism to place emphasis on the key concept n Maxwell equation. Both the experimental and the control group were taught with the same format and were given instructions on how to construct concept maps. The result of the study indicated that the experimental group declined in physics test score early in the semester, but impressed later before the semester ended.

The investigation used word association and found that the experimental group was better in its ability to assimilate key physics concept in electricity and magnetism.

One of the early studies conducted in Nigeria on the concept mapping instructional strategy was that of Olumide, Okebukola and Odubunmi (2007). The study sought to determine the combined method strategy and cooperate learning in enhancing meaningful learning. A total of twenty

three students participated in the study. The student were assigned randomly to leader method group class and large class group. The experimental group was given instructions based on concept mapping, while the control group was given instruction based on lecture method. The result of the study indicates that both the experimental and the control group did not perform well on the study test. However, the interaction of cooperate learning and concept mapping strategy resulted in a better performance on the part of the experimental group.

Also Okebukola and Jegede (2008) found out that students who used the concept mapping strategy cooperatively perform better than those who used the concept mapping. One hundred and forty five biology undergraduate students participated in the study. The investigators hypothesized that cognitive preference and learning mode were determinant of meaningful learning through concept mapping. Fifty five percent (55%) of the experimental group students opted for cooperative work, while the remaining forty five (45%) opted for individual work. The cooperative group was divided into five members ability groups through the stratified randomly sampling technique to ensure the heterogeneity of the group with respect to gender and ability level. The experimental group students were exposed to concept mapping strategy, while the control group received instructions through lecture method. Both groups were taught. Biology concept topic (photosynthetic). Students in the experimental group constructed their own maps after treatment. Both the experimental and the control group were given same achievement test. Findings from the study showed that concept mapping strategy enhances meaningful learning. Assim (2008), in a study with a sample of one hundred and sixty four students (eighty – eight male and seventy four female) in Calabar municipality & cross River state of Nigeria, used a factorial design in which three modes of teaching methods (concept mapping, interactive teaching method and lecture method) was crossed with 2 level of abilities (high and low) and 2

categories of gender (male and female). Test of concept attainment at the classification, correlational and theoretical levels were dependent variables. It was found that there was a significant main effect of treatment, with students in the concept mapping mode gaining most, followed by those in the interactive mode, with those belonging to the control group scoring the lowest. She, thus, found out that concept mapping enhances meaningful learning.

Also, Jegede, Alaiyemo and Okubukola (2009), carried out a study to find out if the Meta cognitive strategy of concept mapping reduces anxiety and enhances achievement in biology. They examined fifty one (thirty boys and twenty one girls) Senior Secondary One students using Zuckerman's Affect adjective and Biology Achievement Test (BAT) in pre and posttest sessions to measure the treatment effect on anxiety and achievement, respectively. Their findings support the stand that concept mapping is significantly more effective than the traditional expository teaching strategy in enhancing learning biology.

Oganwu (2008) studied the effect of teaching methods on students understanding of social studies in junior secondary school in Warri South Local Government Area of Delta State. The sample of the study comprises 218 JSS III students from three schools in the area of the study. The researcher used questionnaires as the instrument for data collection of mean, standard deviation and analysis of covariance (ANCOVA) were used for data analysis at the 0.05 level of significance. The findings of the study revealed that there was a significant difference between the mean concept attainments of students taught social studies by using the appropriate teaching method such as the Concept mapping dramatization method and inquiring method.

Mbakwem (2007) conducted a study on the evaluation of teaching method used in teaching social studies in River State College of Education, Port Harcourt. The population of the study was

all registered students for NCE II in Social Studies, and they were 450 members. The researcher used questionnaire as the instrument for data collection and the data were by analyzed using mean standard deviation and analysis of covariance (ANCOA) at the 0.05 level of significance.

Snezana (2011) undertook a study on the effect of teaching methods on cognitive achievement, retention, and attitude among biology students in University “Goce Delcev”, faculty of Natural and technical sciences. The objective was to determine the effects of usage of sequential teaching methods on the academic achievement and retention level of the students Strip, R. Macedonia were offered a topic on general characteristics of proteins: Their Biological Functions and Primary Structure with different sequences of the teaching methods. The teaching methods were laboratory method (Students Experiment), slide demonstration and lecture and lecture method. The first group started the course with experiments in the laboratory, then the relevant theory of proteins were given in lecture method, and then the slides was shown (Group I). the sequence of these three teaching methods used in the first group was changed in both the second and the third round as follow: The lecture methods, slid show and experiment in Group II, and slide show, experiment and lecture method in Group III, respectively. The laboratory method used in the study was focused on the topic of this diversity and abundance that reflect the central role of proteins in virtually all aspects of cell structure and function. Achievement test contained twenty questions, testing the knowledge of facts as well as the ability to transfer the knowledge and problem solving ability. This test was used as pre – test, before the methods application, post – test, after the methods’ application and retention test after thirty days from the methods applied. Students exposed to the experimental methods were found to have developed better achievement and retention capabilities than those taught vig the conventional lecture method. The present study is similar to the above study in focus but is limited to concept mapping strategies and the

lecture method only. The subject of orientation differs from this study. But, both studies are concerned with improved in achievement and retention among the students.

Zagun, Abba and Gade (2012) conducted a study at University Sains Malaysia to find out the effect of concept mapping teaching strategy on the academic achievement of Senior Secondary schools students in Genetics, population of the study was all the 20 senior secondary schools students in Dergi metropolis. Two senior secondary school were randomly selected and made into experimental and control groups. The design for the study was pre – test post test control group. Genetics Achievement Test (GAT) was prepared by the researchers and validated by two senior lectures from education department ABU Zaria and a reliability coefficient of $r = 0.70$ was arrived at after test piloting. Data collected was analyzed using t-test statistics. The results indicated that students taught Genetics using concept mapping instructional strategy achieved higher than those taught using expositing method. It was recommended that teachers need to diversify their method of teaching genetics such as concept mapped teaching strategy as it will assist a higher academic achievement of learners.

Gonden, Ephrain Jael and Delmang Tabith Kanyi both of department of education, University of Jos, Plateau state, Nigeria Studied the efficacy of concept mapping instructional strategy in remedying students problems – solving difficulties in stoichiometry. The study used pre – test posttest control group design, male and female students were randomly selected, pretested and assigned into control and concept mapping groups. The control group was taught using lecture method, while the experimental group was taught using concept mapping. A stoichiometry Problem Solving test (SPST) was developed and used. The statistical technique and was tested. The study found out that there was a significant difference between the post – test means scores of student taught stoichiometry using concept mapping strategy and those in control. The

efficacy of concept mapping strategy in enhancing students solving ability in stoichiometry among male and female students was therefore established. The study recommended the use of concept mapping strategy by chemistry teachers to teach stoichiometry to improve problem solving among male and female students.

Ajaja investigates if the use of concept mapping as a study skill can influence students achievements in biology. The design of the study was Quasi experimental pre-test posttest control group design. The population consisting of 280 SS2 students from where 120 students were selected 100 students were used for analysis while 20 students dropped out of the study. To guide this study, five research question were raised and three hypothesis stated and tested at 0.05 level of significance. The major instrument used for data collection was biology achievement test. Another instrument used for data collection was an interview schedule to determine the students perception of the usefulness of concept mapping as a study skill. It was found out that concept mapping could serve as appropriate alternative for teaching biology since what is learned through it can be retained for a long time.

Mankilili and Umanu (2011) determine the effect of teaching method and ability on student's achievement in physics concept mapping expository strategies were the teaching methods considered. Physics achievement test (PAT) was administered to 129 Senior Secondary School Students (SS!) of two intact classes. Data collected were analyzed using mean, standard deviation and analysis of co-variance (An- Cova). The result shows that students exposed to concept mapping strategies performed better than those exposed to expository method.

Nekang and Agwagah (2010) carried out a study on effect of concept mapping on students achievement and interest in elementary probability. A 12 item essay achievement test in

elementary probability (ATEP) and 13 item probability and statistics interest inventory (PS11) were administered to 154 subjects before and after teaching. The interval consistency of ATEP (0.70) and the reliability coefficient of PS1 (0.64) were computed using the Cronbach Alpha. The subjects were randomly drawn from two schools in Biu area in the north west region of Cameroon. Data were analyzed using means and standard deviation to answer the research questions and a two way (2 x 2) analysis of covariance (ANCOVA) to test the two hypotheses stated at $P \leq 0.05$ level of significance. Results show that concept mapping enhances student achievement and interest in probability statistics in Biu area of Cameroon.

However, many studies have actually been carried out in the area of concept mapping in relation to students' achievement and retention in many subjects. But there is still need for further research in the area of social studies. There are indications of inconclusive and inconsistent trends in the area of male and female achievement in social studies. Therefore there is a need to carry out further investigation.

Auwal (2013) carried out a study on the effects of teaching method on retention of Agricultural Science knowledge in Senior Secondary Schools of Bauchi Local Government Area, Nigeria. The objective was to determine the effect of two teaching methods: demonstration and discussion on students' retention of Agricultural Science knowledge in secondary schools of Bauchi Metropolis. The study was guided by two research questions based on the specific objectives and the three null hypotheses, tested at the 0.05 level of significance. The pretest-posttest control group quasi-experimental design was employed. All the students from three SS II classes were used; one class each from three randomly selected schools. A twenty item multiple choice achievement test was administered to the two treatment groups before and after the treatment and the scores obtained were analyzed by mean, standard deviation and t-test. The findings revealed

that both the two teaching methods have significant effect on students' retention of agricultural Science knowledge. Demonstration Method was found to be more effective in making the students remember agricultural Science knowledge. It was therefore, recommended that the Demonstration Method be used in teaching Agricultural Science in Bauchi State Secondary schools.

Oriafi (1983) conducted a research using four senior secondary schools students in Enugu to test the effectiveness of lecture method and concept mapping method in teaching of chemistry and came out that lecture method was not as effective as the concept mapping state. There were significant differences in their performance but this is not enough to conclude that lecture method will not be appropriate for teaching social studies.

At Ife, Nigeria, a stratified random of two hundred and fifteen social studies students randomly assigned to two groups by adeyemi (1992) to find out whether the achievement of secondary school student differs significantly according to whether they are taught by concept mapping strategy or the lecture method approach method. The aggregate mean performance were compared by the use T- test which showed that there was no significant difference between the two groups on the pre-test scores but there was a significant difference between the post test scores, in favour of the group taught by concept mapping strategy country.

Adamu (1989) coming out with study to determine the effects of concept mapping strategy and discussion methods on students learning outcome, he used 190 student in selected secondary schools in Plateu State. He found that there is no significant differences in the performance of the two groups of students.

2.5 Summary and Uniqueness of the study

The chapter reviewed relevant literature which include conceptual framework of the study, typology of concept mapping, academic achievement and learning retention. Other aspect of the review include the theoretical framework, concept, nature and scope of social studies, teaching methods and their type, as well as some empirical studies that were related to the study.

Martins – Omole, Guga and Yusif’s study revealed some similarities with the current study. Both studies used Quasi-experimental on a research design as well as the use of t-test statistical technique. Both studies tried to find out effects of teaching method on academic performance of students. However, while their study was in the science, this study is in the area of social sciences, also their studies is in Abuja, federal capital territory, involving senior secondary school students, the current study was in Kano state involving Junior Secondary schools students.

The chapter also reviewed the work of Obionor which is similar to this study, because his study also tried to test gender based performance. However, his study is also bases on the sciences, while this study is based in the area of social sciences. Also, the statistical data used differs, while Obionor used ANOVA to analyzes data, this study used t-test statistical technique in analyzing data. In this study the researcher attempted to bring to the fore conceptual framework in which discussion revolved around concept mapping strategy, typology of concept mapping, nature and scope of social studies, academic achievement and learning retention. From theoretical framework angle, a brief discussion of Piagetian theory of cognitive development has been offered. Empirical studies were also reviewed in relation to concept mapping strategy,

academic achievement and learning retention. The major findings of the empirical studies highlighted.

This study sought to address the limitations of the current literature base concerning concept mapping strategy on achievement and learning retention in social studies. The myriad of challenges that bedeviled high performance in social studies and ability to retain learning among Junior Secondary School students require robust efforts through consisted research to evaluate the efficacy of instructional strategies. Moreover, to the knowledge of the researcher no such study with this topic, location and population size has been conducted in the area selected for the current study.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter would discuss on the methodology and procedures used to carry out this research. The chapter would discuss the research design, population of the study, sample size and sampling procedure, data collection instruments, validation of data collection instruments, pilot study, reliability of the instruments, procedure for data collection and procedure for data analysis.

3.2 Research Design

The research used a Quasi – experimental pretest – posttest non – randomized control group designed. This design was used because of the nature of the study; nature of variables under investigation and also because two intact classes were used without the application of randomization procedure.

3.3 Population and Sample

3.3.1 Population of the Study

According to Mamiclan and Weyers (2006), a population refers to all the members of a real hypothetical set of people, events or objects to which we use to generalize the result of the study. The population of this study comprised all government Junior Secondary School Students (JSSII) in Kano Municipal which comprised of Municipal Local Government and Tarauni local Government of Kano state.

Table 1: Summary of Population

Zone	No of GJSS boys	No of GJSS (Girls)	Total
Municipal	15	11	26
Grand Total	15	11	26

Source: State Universal Basic Education Board (SUBEB), Kano 2019

3.3.2 Sampling Technique

Six schools were randomly sampled from the zone using the balloting method (3 boys and 3 girls), while two intact JSS II classes were purposely selected in each school and made into control and experimental groups. All these schools operate a common social studies syllabus and the staff quality is considered similar.

Table 2: Summary of Samples

Zone	Name of School	Control Group		Experimental Group		Total
		Class	No of students	Class	No of students	
Municipal	GJSS Kurmawa	2A	44	2B	16	60
	GGJSS Sallari	2C	48	2D	32	80
	GJSS Rumfa	2C	41	2A	41	82
	GGJSS Yakasai	2A	34	2B	32	66
	GJSS Salanta	2D	20	2A	64	84
	GGJSS Aish Ababalle	2C	32	2D	34	66
Grand Total			182		219	438

Table 3: Distribution of Sample that participated in the study

Sex	Control	Experimental	Total
Boys	105	121	226
Girls	114	98	212
Total	219	219	438

All in all, two hundred and twenty six boys and two hundred and twelve girls participated in the experiment. The breakdown shows that one hundred and five boys and one hundred fourteen girls were involved in control group, while one hundred and twenty boys and ninety eight girls were involved in the experiment group.

3.4.1 Data Collection Instrument

The study employed two (2) self – developed instruments to collect data and these were:

1. Social Studies achievement test (SSAT)
2. Social Studies learning retention (SSLRT)

3.4.1 Social Studies Achievement Test:

Social Studies achievement test was a multiple choice test consisting of twenty five terms with upto A – D and 2 marks for each questions with total marks of fifty (50) marks. The test was constructed using Junior Secondary School Social Studies syllabus and covered topics selected for this research. These topics were transportation, communication and marriage system in Nigeria. The test also has concept mapping task.

3.4.2 Social Studies Learning Retention Test (SSLRT)

Social Studies learning Retention test was fill in the blank type consisting of twenty five items carrying two marks (2) each with a maximum of fifty (50) marks. The test was constructed using Junior Secondary School Social Studies syllabus and covered topics selected for this study.

3.5 Pilot Testing/ Study

A pilot study was conducted at government Junior Secondary school, Tudun Yola in Ungogo Local Govt. Area of Kano state which was not part of the original sample for the study. The main thrust of the pilot study testing was to determine the suitability, adequacy and reliability of social Studies achievement test (SSAT) and social studies learning retention test (SSLRT). The researcher did this to ascertain and prepare for any challenge that may come across when carrying out the main study.

3.6 Validation of the Instrument

The two instruments Social Studies Achievement Test (SSAT) and Social Studies Learning Retention Test (SSLRT) were validated by head of department of social studies, Federal College

of Education, Kano, the researcher's supervisor, Test and Measurement lecturers and English tutors. The fore mentioned made some recommendations as to the content validity and appropriateness of the two instruments. In this regards, I, therefore, overhauled the structure and content of the instruments in line with their recommendations as per the items.

3.7 Reliability of the Instruments

An instrument is said to be reliable if it consistently measures what it is designed to measure. In doing this, reliability co-efficient was sought in conformity with Spiegel and Stephens (1999) who maintained that an instrument is reliable if the reliability co-efficient lies between +0.51 - +1. Therefore reliability of internal consistency was sought for the two instruments using Cronbach's Alpha Co-efficient with Alpha 0.768. This is because Cronbach's Alpha is a statistics generally used as a measure of internal consistency or reliability of psychometric instrument.

The reliability co-efficient of social studies achievement test and social studies retention test were 0.75 and 0.70 respectively, after employing a test retest method.

3.8 Data Collection Procedure

The study spanned for a period of twelve weeks. The researcher with the assistance of some social studies teachers conducted the pretest. Teaching with two methods (Lecture and concept mapping) was carried out independently in the selected classes of the schools. The performance test results before exposing the experimental group to the use of concept mapping were collected and recorded as pretest. After the experiment, another achievement test was conducted for the two groups and the results obtained were recorded as post test. A lesson plan was developed by the researcher for the control group and the experimental group.

3.9 Data Analysis Procedure

The data collected for this study were analyzed using descriptive statistics consisting of means and standard deviation for proffering solutions to the research questions, inferential statistics, specifically two sample test procedure was used in the test of the null hypothesis because of the two independent groups involved. All the hypothesis were tested at the probability level of 0.05.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter would present the data analysis, result and discussion. The analysis involves statistics testing of the research questions and hypothesis. The level of significance 0.05 was used for the analysis, which formed the basis of rejecting or accepting a hypothesis.

Two set of data, pre – test and post – test, were collected from two groups of students Control and Experimental involved in the experiment. One group, control, was taught with the conventional method while the other group, experimental, was taught with the concept mapping strategy. The effects of the two methods of teaching the subject were determined by comparing the academic achievement of the students at the two different levels at which the achievement test was administered. The data collected were statistically analyzed in this chapter in accordance with stated research questions that were formulated along the objectives and hypothesis of the study.

4.2 Summary of Data

After the data was collected, the statistic package used for data analysis was the statistical package for social science (SPSS). The descriptive statistics such as mean and standard deviation was used to answer the research questions 1 – 5, while inferented statistics (Independent sample T- test was sued to test the hypothesis at 5 at 0.05 level of significance.

Research Questions Testing

Descriptive statistics such as means and standard deviation was used to answer the following research questions:

1. What is the effect of concept mapping strategy on academic achievement and learning retention in social studies among junior secondary school students in Kano municipal?
2. What is the retention level of students who were taught social studies using concept mapping strategy.
3. Is there any difference in achievement between male and female students taught social studies using concept mapping strategy in Kano Municipal
4. Is there any difference in the retention level between male and female students who were taught social studies using concept mapping strategy?
5. Is there any difference in achievement between students from high socio-economic status and those from low socio-economic status who were taught social studies using concept mapping strategy in Kano Municipal?

Null Hypotheses Testing

The inferential statistics independent sample t- test was used to test the following hypothesis.

1. There is no significant relationship in achievement among Junior Secondary schools students in Kano Municipal. The data collected under this were continuous data within two samples. The statistical test employed for the analysis was tested at a -0.05 level of significance.
2. There is no significant relationship in retention level among Junior Secondary School students of Kano Municipal who were taught social Studies using concept mapping

strategy. The data collected under this were continuous data within two sample. The statistical test employed for the analyses was t-test at 0.05 level of significance.

3. There is no difference in achievement between male and female Junior Secondary School Students of Kano Municipal who were taught social studies using concept mapping strategy. The data collected under this were continuous data within two samples. The statistical test employed was t-test at 0.05 level of significance.
4. There is no significance difference in learning retention level between male and female Junior Secondary School Students of Kano Municipal who were taught social Studies using concept mapping strategy. The data collected under this were contains data. The statistical technique employed for the analysis was t-test at 0.05 level of significance.
5. There is no significance difference in achievement between students from high Socio – Economic Status who were taught social studies using concept mapping strategy in Kano Municipal. The data collected under this were conatinous data within two sample. The statistical technique used for the analysis was t-test at 0.05 level of significance.

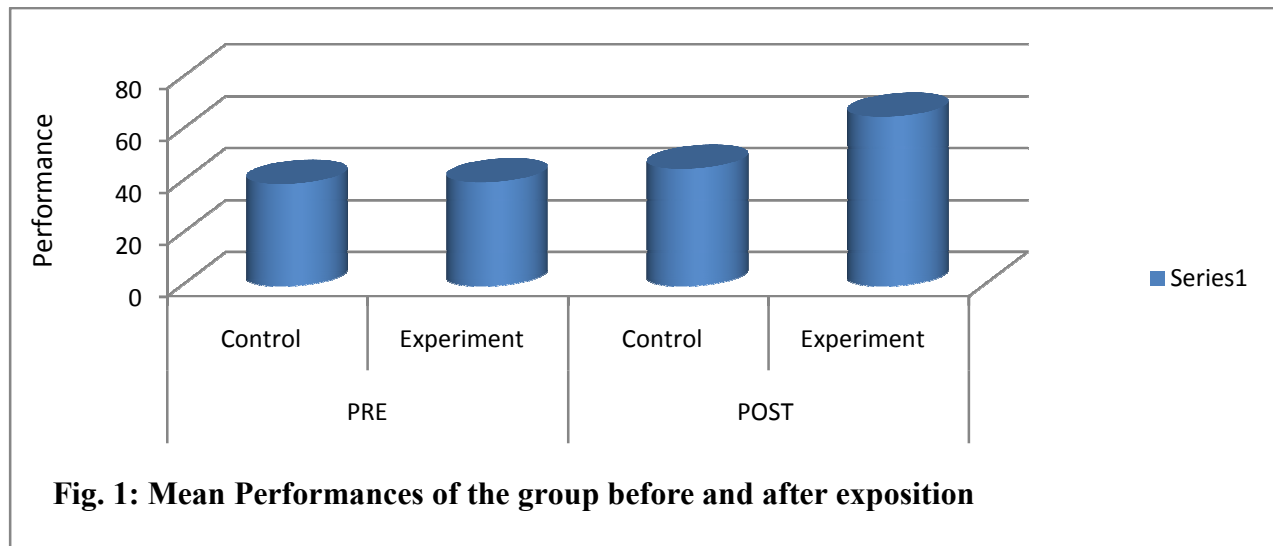
4.3 Answers to Research Questions:

4.3.1 Research Question One: what is the effect of concept mapping strategy on student achievement in social studies among Junior Secondary school students in Kano Municipal?

To determine the effects of concept Mapping strategy on the student's academic achievements in Social Studies, the performance of the two groups control and experimental before and after treatment were computed and compared as shown in Table 4.1 a graphical representation of the performances is presented in figure 1.

Table 4: Means scores in Social Studies Achievement test of the two groups Before and after experimenting with Concept Mapping Strategies.

Groups	N	Pre-test		Post – test	
		Mean	Std Dev.	Mean	Std. Dev.
Control	219	39.33	5.373	45.18	7.776
Experimental	219	39.94	5.312	65.17	11.067
Mean difference		0.61		19.99	



The mean achievement of the control group and the experimental group did not differ much in the pre – test. This is revealed in table 4 and figure 1. After exposing the experimental group to the concept mapping strategy, their means scores increased from 39.94 to 65.17 compared with their counterparts taught by using the Lecture Method (control) Whose mean achievement only increased from 39.33 to 45.18. The mean difference between the two groups before the experiment was only 0.61 compared to 19.99 obtained after the treatment administration of the experimental group. From the observation, the experiment had some impact on the groups since both had their performance improved after the experiment. But, there was a greater improvement among the group exposed to the use of the concept mapping strategies. This is a clear indication

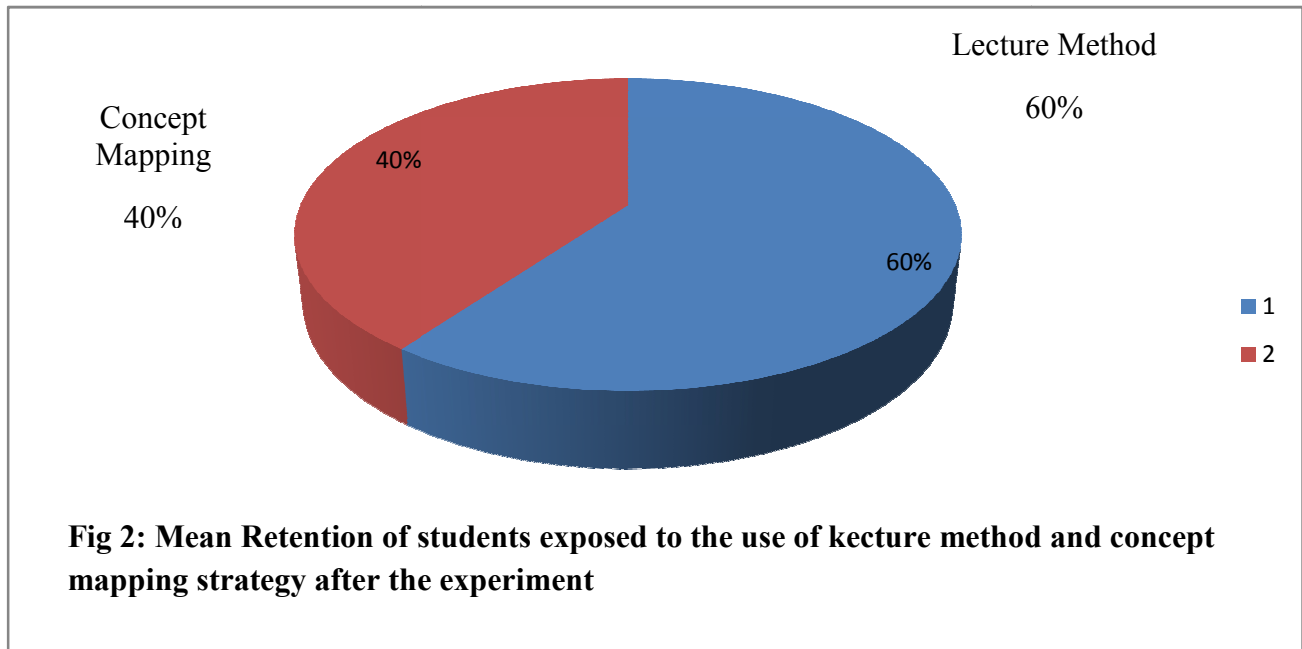
that the use of the concept mapping strategies has more effect on the student's academic achievement than that was obtained in the case of the group taught by using the lecture method.

4.3.2 Research Question Two: What is the retention level of student who were taught social studies using concept mapping strategy in Kano Municipal?

The aim here is to determine the retention level of the Social Studies students who were taught social studies using concept mapping strategy. This objective was investigated with the second research question. The effect of the method on the retention ability of the students was computed using the achievement of the two groups two weeks after the termination of the experiment. Their means scores are compared in table 5 with a graphical illustration in figure 2.

Table 5: Mean retention of students taught using concept mapping strategy

Group	N	Mean	Std deviation	Mean difference
Control	219	45.62	7.834	22.38
Experiment	219	68.00	8.407	



The mean retention of students exposed to the use of concept mapping strategies is 68.00 compared to 45.62 obtained for those exposed to the use of the conventional lecture method. The mean difference is 22.38 in favour of students taught with the concept mapping strategies. This shows that the learning retention of students taught Social Studies with the use of concept mapping strategies is highly better than those taught with lecture method. The significance of this observed variability in the retention level of the students is tested in the related hypotheses.

4.3.3 Research Question Three: Is there any difference in achievement between male and female students who were taught Social Studies using concept mapping strategy in Kano Municipal?

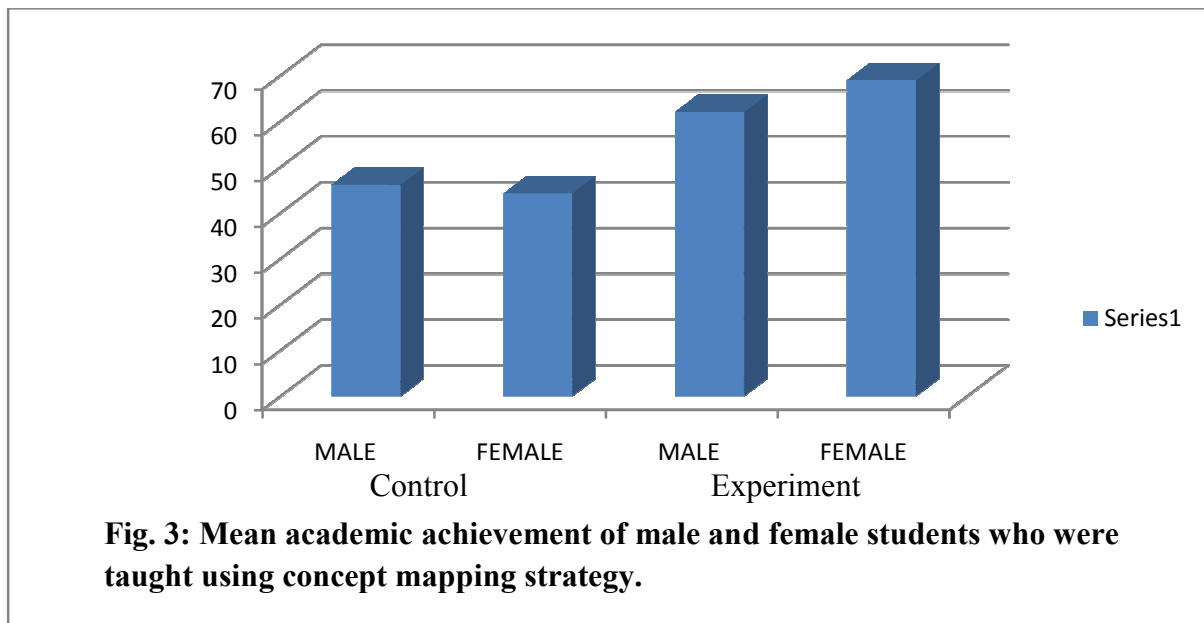
The effect of gender on the academic performances of students exposed to concept mapping strategy is explored here to determine if there is a difference in achievement between male and female students taught Social Studies using the method. To provide the solution to this question,

the mean scores of the male and female students in the post test scores were computed for the different groups and compared.

Table 6 shows the means and the graphical illustration is presented in figure 3 below.

Table 6: Mean Achievement of male and female students taught using concept mapping strategy

Group	Sex	Mean	Std Deviation	N	Mean difference
Control	Male	46.18	9.808	105	-1.92
	Female	44.26	5.134	114	
Experimental	Male	62.09	12.811	121	6.89
	Female	68.98	6.764	98	



The mean score by the male and female students exposed to the lecture method only differ slightly with 1.92 which means there was no major difference between the groups in terms of

gender. For those in the experimental group, the mean difference was 6.89 in favor of the female students. In this experimental group, the observed variability is relatively high. The observation implies a major difference in performance between the male and female students exposed to the use of concept mapping strategies in the teaching of the subject.

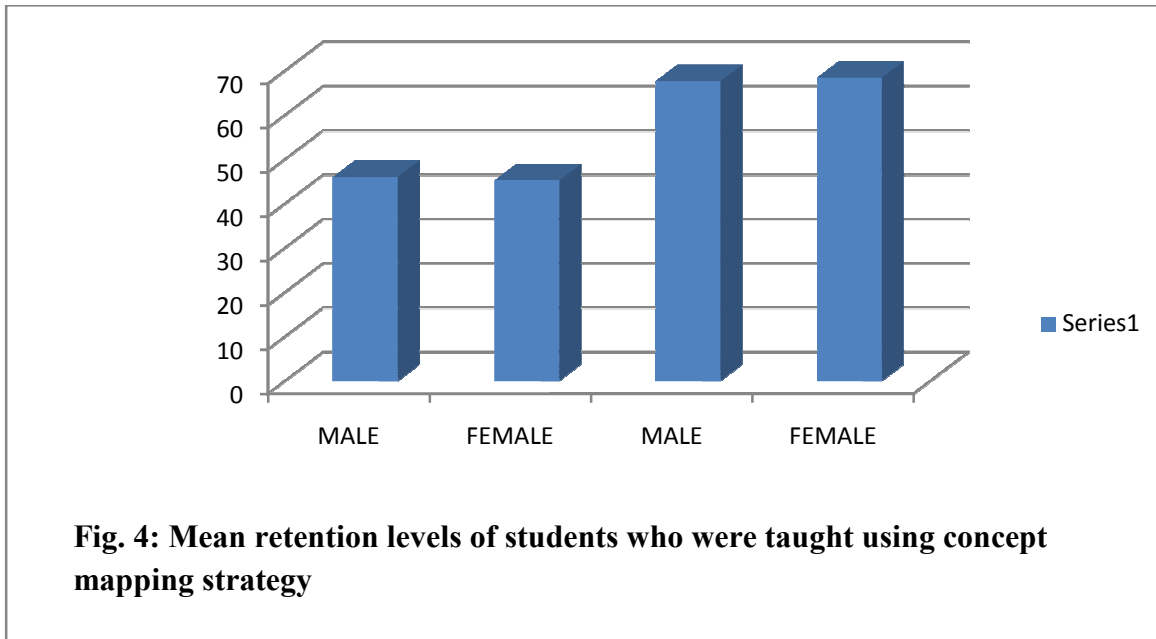
The significance of the observed difference is tested in the related hypothesis

4.4.4. Research Question Four: Is there any difference in learning retention level between male and female student who were taught Social Studies by using the concept mapping strategy in Kano Municipal?

The gender effects of the method is here explored to identify the difference in learning retention level between male and female students taught Social Studies using concept mapping strategy. The mean retention scores of the male and female students from the two groups were computed independently and compared to identify difference result from gender orientation of the students. The summary is presented in table 7. With graphical illustration in figure 4 below.

4.4.5. Table 7: Mean retention of male and female students taught social studies using the concept mapping strategy.

Group	Sex	N	Mean	Std deviation	Mean difference
Control	Male	105	46.04	9.833	-0.81
	Female	114	45.23	5.394	
Experimental	Male	121	67.65	8.052	0.78
	Female	98	68.43	8.849	



The mean retention of males and female students did not differ very much in the group exposed to the lecture method as the mean difference was only -0.81 in favor of the male students. For the group exposed to concept mapping strategy, no major variability in the retention levels of the male and female students was observed. The mean difference is 0.78 in favor of the female students. The observed variability in the mean retention of the students is tested in the related hypothesis for statistical significance.

4.3.5: Research Question Five: Is there any difference in achievement between students from high socio – economic status and those from low socio – economic status who were taught social studies using concept mapping strategy in Kano Municipal?

To Determine if there is a difference in achievement between students from high socio-economic status and those from low socio – economic status who were taught social studies using concept mapping, the performance of the two groups were computed and compared as given in table 8 below:

Table 8: Mean difference in learning retention of Students from high and low socio – economic status who were taught social studies with concept mapping strategy

Group	N	Mean	Std Dev.	Mean	Std. Dev.
High SES	219	46.05	4.070	39.50	9.80
Low SES	219	45.23	4.912	39.05	9.05
Mean Difference		0.82		0.45	

The mean difference between the two groups did not differ much on both pre-test and post test. The mean difference between the two was only 0.82 and 0.45 before and after the treatment respectively. This is clear that there is not much difference in achievement between the student from high and low socio – economic status.

5.3 Hypothesis Testing

The hypothesis formulated to test the effect of concept mapping strategy on the academic achievement and learning retention of Junior Secondary Schools students in social studies are tested in this section. Five null hypothesis were formulated along the specific objectives and research questions of the study and the test was conducted at the probability level of 0.05 with the two sample t-test procedures because of the two independent groups. The tests were carried out as follows:

4.3.1 Hypothesis I: there is no significant relationship in achievement among Junior secondary school students who were taught social studies using concept mapping strategy in Kano Municipal?

The academic achievement of the two groups before and after the experiment were compared in the test of this hypothesis to determine the level of effects of the exposition to the two methods

(lecture and concept mapping strategies) of teaching the subject. The two sample t-test were used to compare the performances of the two groups. The results are summarized independently in tables 9 below.

Table 9: Two sample t-test on the students' academic achievement in social studies after being Taught with Concept mapping strategy

Variable	Group	N	Mean	Std Dev.	t-value	DF	p-value	Remark
Pre	Control	219	39.33	5.373	1.190	436	0.235	NS
	Experimental	219	39.94	5.312				
Post	Control	219	45.18	7.776	21.872	436	0.000	Sig
	Experimental	219	65.17	11.067				

(Critical value of t at 436 DF = 1.96, $P < 0.000$)

The result showed that the two groups had significant relationship in their achievement before the treatment in which the experimental group was exposed to the use of the concept mapping. The observed t-value for comparing the two groups obtained in the test is 1.190 at 436 degree of freedom (DF) and the P-value obtained is 0.235 ($P > 0.05$). The observations show that the two groups did not differ significantly in their performances before the Concept mapping group was introduced. After (post-test) the treatment with the Concept mapping strategies, a significant difference was observed between the groups in their performances. The observed t-value rose to 21.872 and the significant level obtained was 0.000 ($P < 0.05$). From these observations there is evidence to reject the null hypothesis that there is no significant relationship in achievement among Junior Secondary school students taught Social Studies using the Lecture Method and those taught using the Concept mapping strategies in Kano state. This would mean that the two

groups were basically at the same level of performance before the experiment but after the treatment, the proves that the use of concept mapping strategies could be a better option of teaching the subject.

4.3.2 Hypothesis II: There is no significant relationship in learning retention level of student who were taught social Studies using concept mapping strategy among junior secondary schools students in Kano municipal.

The two sample t-test was for the test because of the two levels of the independent groups (Teaching methods). A summary of the test is presented in table 10 below.

Table 10: Two sample t-test on the learning retention of social studies students who were taught using concept mapping Strategy.

Group	N	Mean	Std Dev.	t-value	DF	p-value	Remark
Control	219	45.62	7.834	28.825	436	.000	Sig
Experimental	219	68.00	8.407				

(Critical value of t at 436DF = 1.96, P<0.05)

The observed t-value for comparing the two groups in the table is 28.825 which was obtained at 436 degree of freedom. The observed level of significance for the test is 0.000 (P<..05). these are clear indications that the two groups were significantly different in their retention after the experiment. From the mean scores, the students exposed to the use of Concept Mapping in the teaching of the subject had a higher retention ability that their counterparts who were taught with the Lecture Method. By these observations, the null hypothesis that there is no significant relationship in retention ability of students taught Social Studies using the Lecture Method and those taught using the Concepts Mapping Strategies in Junior Secondary Schools in Kano Municipal is, therefore, rejected.

4.3.3 Hypothesis III: There is no significant difference in achievement between male and female students who were taught Social Studies through using by using the Concept Mapping Strategy in Junior Secondary Schools of Kano Municipality.

The scores of the male and female students in the two groups after the experiment were computed and compared for this test. The two sample t-test procedure was used for the test because o the two independent groups (Male and Females). A summary of the test is presented in Table 11 below.

Table 11: Two sample t- test on achievement in social studies between male and female students who were taught using concept mapping Strategy.

Group	Sex	N	Mean	Std Dev.	t-value	DF	p-value	Decision
Control	Male	105	46.18	9.808	1.833	217	.068	NS
	Female	114	44.26	5.134				
Experimental	Male	121	62.09	12.811	4.807	217	.000	significant
	Female	98	68.98	6.764				

For the control group, there was no significant difference between the male and female students in their performances. The observed t-value (1.833) is lower than the critical value of 1.96 and the observed level of significance (0.068) is greater that the fixed level of 0.05 ($p > 0.05$). This means that the null hypothesis could not be rejected on the basis of the lecture method. Between the male and female students, significant difference was observed in their performances. The observed t-value is 4.807 and the significant level obtained is 0.000 ($P < 0.05$). With this observation, the null hypothesis could be rejected. The implication here is that the use of the Concept Mapping tended to have gender effects.

4.3.4 Hypothesis IV: There is no significant difference in learning retention level between male and female student who were taught Social Studies by using the Concept Mapping strategy in Kano state junior secondary schools.

This hypothesis was tested with the retention or recall data of the post – test scores experimental after the experiment. The two sample t-test procedure was used for the test because of the two independent groups (Males and Females) involved in the hypothesis. The result of the test is summarized in Table 12 below

Table 12: Two sample t-test on learning retention of male and female students who were taught using concept mapping Strategy.

Group	Sex	N	Mean	Std Dev.	t-value	DF	p-value
Control	Male	105	46.04	9.833	0.764	217	.446
	Female	114	45.23	5.394			
	Male	121	67.65	8.052	0.678	217	.498
Experimental	Female	98	68.43	8.849			

(Critical value = 1.96)

The result did not reveal a significant difference in the retention or in the ability of the male and female students after the experiment for those in the lecture group. The observed t-value is 0.764 and 0.446 for the significant level ($P > 0.05$). for those taught with the Concept Mapping Strategies, no significant difference was observed in the learning retention of the male and female students. This is deduced from the observed t-value of 0.678 compared to its critical value of 1.96 and an observed significant level of 0.498 ($P > 0.05$). By this observation, there is enough evidence to reject the null hypothesis. The null hypothesis that there is no significance difference in the learning retention between male and female students taught Social Studies using the Lecture Method and those taught using the Concept Mapping Strategies in Kano municipal Junior Secondary Schools is, therefore, accepted.

4.3.5 Hypothesis V: There is no significant difference in achievement between students from high Socio-Economic Status and those from low Socio – Economic status who were taught social studies using concept mapping.

To determine if there is a difference in achievement between students from high Socio – Economic status and those from low Socio – Economic status, who were taught Social Studies using concept mapping, the performance of the two groups were computed and compared as given table 13 below:

Table 13: Mean difference in achievement between student from high and those low socio – economic status who were taught using concept mapping Strategy.

Group	Sex	N	Mean	Std Dev.	Mean	Std Dev	t- value	DF	p- value
Pre – test	High SES	219	46.05	4.070	39.50	9.8	19.04	436	0.80
	Low SES	219	45.23	4.912	39.05	9.5			
	High	219	45.19	8.051					
Post-test	Low	219	45.01	8.801			26.40	436	

(Critical value of t at 436 DF= 1.96)

The observed t- value for the two groups in the table is 11.040 before the treatment, which is higher than critical value of 1.96. also after the treatment, the observed t-value is 21.400 which is higher than critical value of 1.96. therefore, with this observation, the hypotheses that there is no significant difference in achievement between students from high socio economic status who were taught social studies using concept mapping strategy is accepted.

4.4. Summary of Findings

The findings from data analysis and the test of the hypotheses are summarized as follows:

1. The use of the concept mapping strategy had proved better that the conventional lecture method of teaching Social Studies in improving students’ academic performance in the subject.

2. The method of concept mapping strategy is significantly better for students' learning retention than what was observed with respect to the conventional lecture method of teaching social studies.
3. Male and female exposed to the use of the lecture method did not differ significantly in their academic achievement. But the male and female students exposed to the use
4. The male and the female students taught social studies with the use of the Lecture method and the Concept mapping strategies did not differ significantly in their learning retention.
5. There is no significant difference in achievement in social studies between students from high socio economic status and those from low socio economic status using concept mapping strategy.

4.6 Discussion

The study investigate the effects of concept mapping strategy on achievement and learning retention level of students in social Studies among Junior Secondary schools students in Kano Municipal. Five null hypotheses which were tested in line with the specific objectives and research questions of the study. Null hypothesis I tested the effects of concept mapping on the academic achievement of the students. From the statistical analysis of the data of this experiment, the use of the concept mapping strategy for teaching social studies was found more effective in enhancing student's academic achievement than the conventional lecture method of teaching the subject. The result of the study showed that students who ere taught social studies with the concept mapping strategy performed significantly better in their academic achievement than students who were taught the same subject with the conventional lecture method. The null hypotheses was, therefore, rejected. This finding clearly revealed that the concept mapping strategy has better enhancement on students' academic achievement. The finding of this study

agree with Chious' (2008) who concluded that those exposed to accounting using the concept Mapping performed better than those exposed to accounting using the expository method.

In the test of null hypothesis II, which is on the effects of concept Mapping strategy on learning retention of the two groups, the result revealed that the mean retention of students exposed to the use of the concept mapping in the teaching of the subject was significantly higher than what was obtained from students taught with the conventional method. The null hypothesis was, therefore, rejected. The findings here agree with Jegede, Alaiyemo and Okebukola (1990), who carried out a study to find out if the meta cognitive strategy of the concept mapping reduces anxiety and enhances achievement in biology. They examined fifty one (30 boys and twenty one girls) senior secondary one students using Zuckerman's affect adjective and Biology Achievement Test (BAT) in pre and post test to measure the treatment effect on anxiety and achievement, respectively. Their findings support the stand that Concept Mapping is significantly more effective than the traditional expository teaching strategy in enhancing learning in Biology. The findings here agree with Snezana's (2011) report from a study on "The effect of teaching methods on cognitive achievement, retention, and attitude among Biology students in University "Goce Delcev", faculty of Natural and Technical Sciences. The findings indicated that Students exposed to the two experimental methods had better academic achievement and retention compared with those taught with the conventional method.

Hypothesis III tested the assumed significant difference between the academic achievement of male and female students who were taught the subject using concept mapping strategy. The result did not reveal any significant difference in the achievement of male and female students who were taught the subject with the conventional lecture method. But, the female who were exposed to the concept Mapping strategy had a significantly higher mean compared to their male

counterparts. The null hypothesis was, therefore, rejected on the basis of the observed significant difference for the male and female students in the experimental group but was accepted for those in the control group. The finding, here agree with Oganwus' (2005) report from a study on the effect of teaching methods on students understanding of Social Studies in Junior Secondary School, in Warri South Local Government area of Delta State. The findings of the study revealed that there was a significant difference between the mean concept attainment of students taught Social Studies using the appropriate teaching method such as the Concept Mapping, Dramatization Method and inquiring method.

The effect of Concept Mapping Strategy on the learning retention of the male and female students was compared in test of Hypothesis IV. The result did not reveal a significant difference in the retention levels of the male and female students taught with the lecture and the male and female students taught with concept mapping strategies. The null hypothesis was therefore retained. The results here agree with Auwal (2013) who carried out a study on the effects of teaching method on the retention of Agricultural Science knowledge in senior secondary schools of Bauchi Local Government Area. In Bauchi State. The findings of this study revealed that the two teaching methods have a significant effect on students' retention ability of Agricultural Science knowledge. The Demonstration Method was found to be more effective in making the students remember Agricultural Science Knowledge which was used as the experimental method.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter would discuss the following: summary of the study, conclusion and recommendations as well as suggestion for further studies.

5.2 Summary

The major objective of the study was to find out the effects of concept mapping strategy on academic achievement and learning retention in social studies among Junior Secondary schools students in Kano Municipal. The study reviewed related literature under the following headings; the concept of concept mapping, typology of concept mapping, teaching methods and varieties of teaching methods; the concept, nature and scope of social studies, theoretical framework, academic achievement and learning retention.

The design of the study was Quasi – experimental pre-test posttest. The population of the study was all Junior Secondary schools students (JSS) in Kano Municipal Zonal Educational Directorate which comprises of Municipal local government and Tarauni local government area. Five research questions with five corresponding research hypotheses guided the study. While the research questions were answered using mean and standard deviation (Descriptive statistics) the hypotheses were tested using independent sample t-test (Inferential statistics).

The result of analysis in chapter four, had revealed that concept mapping strategy is a better teaching method in the teaching of social studies than lecture method. The study had shown that,

there is a significant differences between the academic achievement of students taught social studies using concept mapping strategy and those taught using lecture method.

With regard to learning retention, the study had revealed that these students taught social studies using concept mapping had high level of retention than those taught using the traditional method. The study also revealed that there is a significant difference between the retention level of students taught social studies using concept mapping and those taught using the traditional method. With regard to gender, the study did not reveal any significant differences achievement between male and female students who were taught social studies using concept mapping strategy. Also the study did not reveal any significant differences in retention level of male and female students taught with concept mapping and these taught with lecture method, the null hypothesis under this assumption was retained on the basis of this finding.

In addition, the study revealed that there is no significant difference in achievement in social studies between student from high socio economic status and those from low socio economic status. The null hypothesis under this out of the five hypothesis that guided this study three were rejected and two returned.

5.3 Conclusion

From the analysis of the study, it was generally confirmed that there was significant differences between mean achievement of the experimental group and control group in social studies. Also there was high significant difference in retention level between the experimental and control group in social studies. It was also further established that concept mapping strategy is more effective than the traditional teaching strategy in the teaching of social studies. The finding of the study had showed that concept mapping strategy could be alternative when the need for

improving students performance and retention in social studies is the goal. The use of concept mapping strategy, in social studies has the potential to increase students cognition at the same time imparting positively on their effective and psychomotor domains, since it enhances retention.

This study had shown that students that were taught social studies using concept mapping strategy perform significantly better than those who were taught using lecture method. Concept mapping strategy could produce better results in student's understanding of social studies concepts. This study had contributed in the area of establishing the efficacy of concept mapping strategy, in the teaching of social studies. Based on the findings of the study, the research concluded that concept mapping strategy has significant influence on academic achievement and learning retention of social studies students.

5.4 Recommendations

Based on the findings of the study, the following recommendations are made:

1. teachers need to diversify their method of teaching social studies such as concept mapping strategy to assist in higher learning retention
2. to improve academic performance as well as learning retention of students, Social Studies teachers need to use concept mapping strategy.
3. There is a need for training and retraining of social studies teachers on the effective use of concept mapping strategy.
4. Curriculum planners should organize workshops, seminars on concept mapping strategy so that the strategy can be optionally use by the teachers.

5. Concept mapping instructional strategy should be included in the pre-services training at the NCE and undergraduate level.
6. Schools should provided and equipped with necessary materials that will assist teachers in using concept mapping strategy in social studies teaching.

5.5 Suggestions for Further Studies

This research intended to promote and encourage further studies on the teaching of social studies in our schools. To this regard the study suggested the following:

1. This study focused on Public Junior Secondary School Schools in Kano Municipal zonal educational directorate. A similar studies could be replicated on other educational zone of the state to further analyze the effects of concept mapping on academic achievement and learning retention in social studies.
2. A study could also be undertaken to see the effects of concept mapping strategy on academic achievement and learning retention in social studies in private schools in urban areas of Kano State
3. Moreover, a study should be conducted to cover semi-urban and rural schools to teach through concept mapping strategy.
4. Study should be undertaken to cover special schools for the students with special needs.
5. Similar study should be conducted to cover rehabilitation centres

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Abstract

The study examined the effects of concept mapping strategy on achievement and learning retention in social studies among Junior Secondary School students in Kano Municipal, Kano State, Nigeria. Four Specific Objectives from which four research questions and four corresponding hypotheses were formulated for the study. The designed of the study was Quasi-experimental pretest posttest design. All JSS II social studies Students in the directorate constituted the population of the study and six JSS Schools (3 boys and 3 girls) were randomly selected using balloting method from the directorate, while two intact class of JSS II were selected in each school and converted into control and experimental group. A total of 438 students participated in the study broken down as 226 boys and 213 girls in the six selected schools. Instruments used for data collection were social studies Academic Achievement test and social studies learning retention test, which were developed by the research and validated by a Ph.D holder in Social Studies, the researcher's supervisor and some social studies teaching staff. While social studies achievement test was a multiple choice objective, social studies learning retention test was fill in the blank. Reliability coefficient of 0.75 and 0.70 were attained after test piloting the two instruments using pearson product movement correlation (PPMC) statistical technique. Two sets of data, pretest and posttest were collected from two groups of students control and experimental involved in the experiment. Data collected were analyzed using mean and standard deviation for the research questions and t-test statistical technique for the hypotheses at 0.05 level of significance. The findings of the study revealed that students taught social studies using concept mapping instructional strategy achieved higher than those taught the subject using lecture method. It also revealed that student's performance was enhance when they were taught via concept mapping instructional strategy. To this regard, teachers need to use concept mapping instructional strategy so as to improve the academic performance and retention of students.

**EFFECTS OF CONCEPT MAPPING STRATEGY ON ACHIEVEMENT
AND LEARNING RETENTION IN SOCIAL STUDIES AMONG
JUNIOR SECONDARY SCHOOL STUDENTS IN KANO
MUNICIPAL, KANO STATE, NIGERIA**

BY

SANUSI TANKO BALA

SPS/14/MED/00183

**BEING A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE
STUDIES, THROUGH THE DEPARTMENT OF EDUCATION, BAYERO UNIVERSITY,
KANO IN PARTIAL FULFILLMENT OF THE REQUIMENTS FOR THE AWARD OF
MASTER OF EDUCATION DEGREE IN CURRICULUM STUDIES**

**SUPERVISOR
DR. HALIMA RABIU ABDULLAHI**

OCTOBER, 2019

CERTIFICATION

This is to certify that the research work for this dissertation titled “Effect of concept mapping strategy on achievement and learning retention in social studies among junior secondary school students in Kano municipal” by Sanusi Tanko Bala (SPS/14/MED/00183) was carried out under my supervision

Dr. Halima Rabi Abdullahi
(Supervisor)

Date

Prof. Bello Ahmad Bello
(H.O.D Education)

Date

DECLARATION

I hereby declare that this titled “Effect of Concept Mapping Strategy on Achievement and Learning Retention in Social Studies Among Junior Secondary School Students in Kano Municipal” is the product of my research efforts under the supervision of Dr. Halima Rabi Abdullahi. No part or whole of this dissertation has been presented elsewhere for the award of a Degree or Certificate. Information in the text have been duly acknowledge in accordance with American Psychological Association (APA) standard.

SANUSI TANKO BALA
SPS/14/MED/00183

APPROVAL PAGE

This dissertation titled “Effect of Concept Mapping Strategy on Achievement and Learning Retention in Social Studies Among Junior Secondary School Students in Kano Municipal” written by Sanusi Tanko Bala (SPS/14/MED/00183) has been examined and approved as meeting the requirements for the award of Master Degree in Curriculum studies in the department of Education, Bayero University , Kano.

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DEDICATION

I wish to dedicate this work to my beloved mother Hajiya Uwani Tanko

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APPENDIX A

LESSON NOT FOR CONCEPT MAPPING INSTRUCTIONAL STRATEGY

LESSON NOTE 1

Topic:	Transportation System in Nigeria
Class:	JSS II
Duration:	40 Mins
Av. Age of students:	14 yrs
Instructional Aids:	1. Diagrams of different types of transportation in Nigeria 3. Photographs

Previous Knowledge: Students have been seeing and using different types of transportation.

Behavioural Objectives: At the end of the lesson, Students should be able to:

- i. Define the concept of transportation
- ii. Identify different types of transportation.
- iii. Give examples of each type of transportation
- iv. Construct concept mapping on transportation system.

STEP I

Teachers activities;

The teacher will review previous lesson learnt by the students. He then informed class the new topic to learn relates to the transportation system in Nigeria.

A diagram (mapping) of different types of transportation is then introduce by the teacher.

Students' activities

Students to observe the features of diagrammatic (mapping) representations of different types of transportation.

Step II

Teachers' activities

Teacher to present additional diagrams to students. Diagram of different types of transportation will be presented. Teacher asked students to study the diagrams carefully and re-examine their features. He later led the students on discussion on the diagram.

Teacher lists the concept of transport in Nigeria and construct concept mapping on transportation.

Students' activities:

Students are to construct concept mapping on transportation individually.

Step III

Teachers' activities

Teacher to collect students' concept map and together with the students discuss the features of the concept map and compare the concept map with each other. Teacher than uses his prepared map to review the lesson

Students activities

Students to participate actively on discussion on the features of their individual concept map.

APPENDIX D

POPULATION OF THE STUDY

NAME OF SCHOOL	LOCATION	MALE	FEMALE
GJSS ADO YA'U	KMC	M	
GJSS D/AGUNDI	KMC	M	
GJSS JARKASA	KMC	M	
GJSS K/NASSARAWA	KMC	M	
GJSS MAYANKA	KMC	M	
GJSS KURMAWA	KMC	M	
GJSS K/WAMBAI	KMC	M	
GJSS RUMFA	KMC	M	
GJSS K WALLI	KMC	M	
GJSS SALANTA	TRN	M	
GJSS SHAHUCI	KMC	M	
GJSS TUKUNTUWA	KMC	M	
GJSS TARAUNI KUDU	TRN	M	
GJSS TUDUN FULANI	TRN	M	
GJSS ABUBAKAR SADIK	TRN	M	
GGJSS U/GANO	KMC		F
GGJSS RIMI CITY	KMC		F

GGJSS YAKASAI D/Z	KMC		F
GGJSS HOTORO MARADI	TRN		F
GGJSS SALLARE	TRN		F
GGJSS IKHRAM ADFAL	KMC		F
GGJSS ZAGE	KMC		F
GGJSS KOFAR MATA	KMC		F
GGJSS AL-ISRA U/UKU	TRN		F
GGJSS USMANIYYA K/MATA	KMC		F
GGJSS JAKARA	KMC		F
TOTAL		15	11
GRAND TOTAL			26