

**THE EFFECT OF CONCEPT MAPPING INSTRUCTIONAL STRATEGY ON  
STUDENTS' ACHIEVEMENT AND INTEREST IN SENIOR SECONDARY SCHOOL  
ECONOMICS IN AWKA EDUCATION ZONE, ANAMBRA STATE**

**BY**

**OBI, BERNADETTE OBIAGELI**

**PG/M.ED/12/62520**

**DEPARTMENT OF SOCIAL SCIENCE EDUCATION**

**FACULTY OF EDUCATION**

**UNIVERSITY OF NIGERIA, NSUKKA.**

**SUPERVISOR:**

**SUPERVISOR: DR. O. O. NWAUBANI**

**AUGUST, 2016**

**TITLE PAGE**

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**A RESEARCH PROJECT SUBMITTED TO THE FACULTY OF EDUCATION,  
UNIVERSITY OF NIGERIA, NSUKKA, IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF MASTERS DEGREE (M.ED) IN SOCIAL  
SCIENCES EDUCATION (EDUCATION/ECONOMICS)**

**SUPERVISOR:**

**SUPERVISOR: DR. O. O. NWAUBANI**

**AUGUST, 2016**

## APPROVAL PAGE

This project has been approved for the Department of Social Science Education,  
University of Nigeria Nsukka.

By

.....

Dr. O. O. Nwaubani

Supervisor

.....

Dr. O. O. Nwaubani

Head of Department

.....

Internal Examiner

.....

External Examiner

.....

Prof. (Mrs.) Stella Nwizu

Dean, Faculty of Education

### **CERTIFICATION**

Obi, Bernadette Obiageli postgraduate student in the Department of Social Science Education with Registration Number PG/M.ED/SD/12/62520, has satisfactorily completed the requirement for the course and research work for the Degree of Masters in Social Science Education (Education/Economics). The work embodied in this project is original and has not been submitted in part or full, for any Diploma or Degree of this or other university.

.....

Dr. O. O. Nwaubani

Supervisor

.....

Obi, Bernadette Obiageli

Student

## **DEDICATION**

This project is dedicated to all my family members for their prayers, moral and financial support throughout the period of this research work.

## **ACKNOWLEDGMENTS**

My greatest thanks go to God Almighty for crowning this study with success. I feel greatly indebted to my project supervisor Dr. O. O. Nwaubani for his inspiration, guidance, kindness and encouragement to me throughout the period of work. My supervisor devoted his time and effort to reading and commenting on the successive chapters of this work. His advice contributed immensely to improvements in both form and content of this work. I am particularly impressed about his readiness in listening to me any time I visited his office.

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## **Abstract**

*The study was aimed at determining the effect of concept mapping strategy on students' achievement and interest in social studies. The study was carried in Awka Education Zone of Anambra State. Six research questions and six hypotheses guided the study. Literature was reviewed under four major sub-headings namely; conceptual framework, theoretical framework, review of empirical studies, and summary of literature review. The study adopted quasi-experimental research design. The population of the study was three thousand six hundred and six (3606) SS2 students. The sample size for the study was two hundred and seventy (270) SS2 Economics students in four intact classes from four junior secondary schools from the area of the study. Multi-stage sampling technique was used to draw the sample. Economics achievement test (EAT) and Economics interest scale (EIS) were used for data collection from the respondents. The Economics achievement test (EAT) and Economics interest scale (EIS) were validated by three experts. The results of the reliability of the instrument indicated positive correlation coefficient of 0.82 and 0.87 for EAT and EIS respectively. Mean was used to answer research questions while analysis of covariance (ANCOVA) was used to test the null hypotheses at 0.05 level of significance. The findings of the study were that there is a significant difference in mean achievement scores of students taught Economics using concept mapping and those taught Economics using lecture method; that there is a significant difference in mean interest scores of students taught Economics using concept mapping and those taught Economics using lecture method; that there is no significant difference in the influence of gender on mean achievement scores of students when taught Economics using concept mapping; that there is no significant difference in the influence of gender on mean interest scores of students when taught Economics using concept mapping; that there is a significant difference in the influence of location on mean achievement scores of students when taught Economics using concept mapping; and that there is a significant difference in the influence of location on mean interest scores of students when taught Economics using concept mapping. Based on the findings of the study, conclusions were drawn. Finally, the study recommended teachers should adopt concept mapping strategy in teaching Economics curriculum concepts and that quality education in terms of infrastructure should be provided in rural areas as it is in urban areas.*

## **CHAPTER ONE**

### **INTRODUCTION**

#### **Background of the Study**

One of the most challenging issues in education today is the decreasing level of interest and achievement of students in different subjects including Economics. Economics, according to Newman (2009), is the study of production and distribution of goods and services. Harwood (2011) maintained that Economics is the study of utilization of scarce resources for maximization of profit and satisfaction. The study and by implication the knowledge of Economics as a school subject is very crucial for effective, productive and useful human living (Ukpan, 2010). This is because Economics inculcates in the learner the skills for effective production and distribution of goods and services, as well as the skills to minimize expenses and at the same time maximize income. However, in spite of this crucial benefit students could derive from studying Economics, the West African Examination Council (WAEC) chief examiners' reports in recent years have continued to show that the interest and achievement of students in Economics are poor (WAEC Chief Examiners' Report, 2010, 2011, 2012, 2013, 2014 and 2015).

Students' poor achievement in Economics according to Betiku (2012) could be as a result of ineffective method of teaching, attitude of the teachers that teach the subject, and students' lack of interest in the subject. Interest has been viewed as preference for particular type of activities, that is, the tendencies to participate in certain activities. According to Ezike and Obodo (2011), interest is the feeling of intentness, concern or curiosity about an object. It is also regarded as the condition of wanting to know or learn about some subject. It could be referred to

as the quality, which arouses concern, or curiosity, which hold a child's attention on an object. Interest is a strong factor in the teaching and learning of Economics which could influence students' achievement in Economics.

Achievement may be defined as the act of achieving or successful performance. Steven and Sylvester (2000) defined achievement as a thing that somebody has done successfully especially using his/her own efforts and skills. According to Thompson and Fletcher (2001), achievement is an act of achieving a result gained by efforts, the quality and quantity of student's work. According to Anderson (2008), academic achievement is a measure of knowledge gained through education process usually indicated by test scores, grade point average and degree. Academic achievement means how a student performs in school (Madu, 2004).

Student's achievement is usually determined through tests and examinations. A student whose academic achievement is high or impressive in a particular subject such as Economics is rightly assumed to have learnt much in that subject. Therefore learning is the basic raw material for student's achievement (Igbokwe, 1999). Learning is usually enhanced by a number of factors. Ngwoke (2004) identified some factors that bring about learning to include that; learning is more effective if the experience makes sense to the learner. Learning is influenced by the learners' goals, values and motives. Onyeneto and Onyibor (2000) stated that students' poor academic achievement in schools queries the methodology of instruction and therefore calls for an indepth investigation with a view of establishing the relationship between instructional methods and students achievement. Afuba (2012) opined that there exists poor achievement in Economics in secondary schools. This poor achievement, according to Afuba (2012), could be due to poor method of teaching Economics in senior secondary schools.

Teaching is an essential aspect of learning and good teaching with right methods leads to better understanding and mastering of subject matter and eventual high achievement. Ezengwu (2007) stated that majority of teachers in the field still relied only on conventional methods such as lecture method, discussion method among others in the classroom teaching. These methods though not without some advantages are found to be didactic, stereotype, ineffective and non-result oriented. Nebo (2012) stated that these conventional methods of teaching have failed to recognize the uniqueness of the inquiry based nature of Economics and the learner's individuality; thus failed to encourage creative thinking in the learner leading to poor achievement. Based on this, educators and scholars are challenged to seek for effective teaching strategies that are more student-centred such as concept mapping instructional strategy which would enhance academic achievement of students in Economics. According to Nwosu (2007), the use of effective teaching strategy in the classroom is an important predictor of students' academic achievement. Similarly, Arisa (2011) argued that teaching students with innovative teaching strategies produces positive results.

There are numerous instructional strategies that can help students to understand Economics contents. One of the instructional strategies is concept mapping which is considered as an important strategy by teachers and education stake holders alike. Concept mapping is a powerful instructional strategy, which allows for depiction of both the interrelationships among the elements of contents and relationship between new and prior knowledge. Concept mapping has positive effects on various teaching outcomes as well. Concept mapping is an active teaching strategy that encourages critical thinking, enable decision making and learners taking responsibility for their learning (Yearwood, 2005).

According to Merlot (2006), learners can only think critically about contents of subject matter to be learnt if they understand the basic terms and the relationship between associated concepts. Thus, concept mapping enables learners to actively construct a conceptual framework to which new ideas and knowledge are added, related, and refined thereby improving on their learning capability and strategy. Zollman and Robert (2008) affirmed that unless there is understanding of the contents of materials to be learnt in terms of the basic concepts, students are bound to commit unassimilated data into short-term memory and so no meaningful learning will occur. Zollman and Robert further explained that meaningful learning occurs when information is presented in a potentially meaningful way, and the learner is encouraged to anchor new ideas with the establishment of links between old and new materials. In particular, concept mapping offers a technique for revealing students' cognitive structure, and involves the following systemic steps: identifying the major components of the concept, arranging the concept's components in hierarchical order, linking the components with linking phrases, making cross links with directed lines.

The importance of teaching strategies as means of inculcating knowledge to students cannot be over emphasized. The 21st century Economics classroom is based upon a culture of inquiry and knowledge rather than information dissemination. Concept mapping makes it easy for students to understand, remember, and communicate complex information. Sometimes human (including students) brain feels as if it is scrambled because of information overload, overwhelm or ineffective use of the brain. This often leads to inability to solve problems effectively, lack of creative thought, lack of focus, difficulty giving great presentations, problems organizing one's thoughts, poor communication, missing out tasks when planning projects, and forgetting important information. Thus, there is the need for teachers (especially Economics) to

use instructional strategies that provide students the opportunity to participate actively and exercise their brain through critical thinking and analysis.

The opportunity to participate actively will allow the students take active part in making meaning out of the contents taught notwithstanding their gender and location. According to Lee (2001), gender is an ascribed attribute that differentiates feminine from masculine socially. Gender is seen as the categorization in the world of matter into sex. Similarly, Kalusi (2000) viewed gender as a cultural construction that assigns roles, attitude and values considered appropriate for each sex. Ekeh (2000) equally noted that gender implies that Character of being male or female, man or women, boy or girl. On the other hand, location refers to a site, situation or position. Geographically, location refers to a place or an area having compass bearing and distinct boundaries. It could also mean a place where something or person resides in the world. In the same vein, Benton (2000) defined location as a geographical place or an area. It can also mean a settlement whether a village, town or city usually inhabited by human beings.

Gender and location are factors considered by many researchers to influence instructional strategy and cognitive achievement and interest of students in school. Such researchers include; Gwanyama (2006), Ukwungwu (2008), Shaibu and Mari (2010) and Chidulue (2011). These researchers concluded from their research that males perform better than females in cognitive achievement and interest. Other researchers that have shown that gender is a variable that relates to achievement include Agwagah and Ezeugo (2000), Olagunju (2001). On the other hand, Akale and Usman (2013) concluded that gender has no effect in terms of cognitive achievement. It appears that the influence of gender and location on students' achievement and interest has not been settled, hence, the need for these variables in this study. Therefore the main thrust of the study is to find out the effects of concept mapping instructional strategy on students'

achievement and interest in senior secondary school Economics in Awka Education Zone, Anambra State.

### **Statement of the Problem**

Academic achievement and interest of students have become educational touchstone since the late 20<sup>th</sup> century. Students' academic achievement in Economics becomes more worrisome considering the importance of senior secondary Economics curriculum. For example, Economics inculcates in the learner the skills for effective production and distribution of goods and services, as well as the skills to minimize expenses and at the same time maximize income. However, in spite of the crucial benefits students could derive from studying Economics, the West Africa Examination Council (WAEC) chief examiners' reports in recent years have continued to show that the achievement and interest of students in Economics are poor. The students' poor achievement and interest in Economics could be attributed to the use of ineffective teaching methods. In other words, the teaching methods adopted by teachers do not make the learning of Economics easy and interesting to students. The prevailing teaching methods (such as lecture method) do not provide adequate opportunity for students to be active in the learning process. Thus, there is the need to find out effective instructional strategy which will improve students' achievement and interest in Economics by creating opportunities for active participation and critical thinking of students in teaching and learning Economics.

Therefore, the problem of the study put in question form is; will the use of concept mapping instructional strategy in teaching senior secondary school Economics improve students' achievement and interest in Economics in Awka Education Zone of Anambra State?

### **Purpose of the Study**

The main purpose of the study is to determine the effects of concept mapping instructional strategy on students' achievement and interest in senior secondary school Economics in Awka Education Zone, Anambra State. Specifically, the study intends to determine;

- i) the difference in mean achievement scores of students taught Economics using concept mapping instructional strategy and those taught Economics using lecture method.
- ii) the difference in mean interest scores of students taught Economics using concept mapping instructional strategy and those taught Economics using lecture method.
- iii) the influence of gender on mean achievement scores of students taught Economics using concept mapping instructional strategy.
- iv) the influence of gender on mean interest scores of students taught Economics using concept mapping instructional strategy.
- v) the influence of location on mean achievement scores of students taught Economics using concept mapping instructional strategy.
- vi) the influence of location on mean interest scores of students taught Economics using concept mapping instructional strategy.

### **Significance of the Study**

This study has both theoretical and practical significance. Theoretically, the study anchored on constructivism theory by Vgotsky (1987). This theory holds that human beings generate knowledge and meaning from an interaction between their experiences and their ideas. In other words, the theory emphasized that students learn better if they are involved in the

learning process. Thus, the findings of this study will help to show if student will do better when taught using concept mapping instructional strategy.

Practically, the findings of the study will be significant to the Economics teachers, students and curriculum planners. For the Economics teachers, the findings of the study will help Economics teachers to realize the benefits derivable from using concept mapping instructional strategy in teaching Economics. In essence, these findings hopefully will help the Economics teachers to adopt concept mapping instructional strategy in teaching Economics if it is proved to be a better teaching method. This the teachers will do by developing concept mapping of every Economics topic to be taught in the classroom.

The findings of the study will be significant to the students in the sense that it will create opportunity for the students' active participation in the learning process. This will be possible as the Economics teachers are hoped to adopt concept mapping instructional strategy as a method for teaching Economics. If concept mapping instructional strategy is used in teaching Economics, the learners amongst other things will be presented with the opportunity to understand Economics concepts better by learning further the Economics concepts through concept mapping instructional strategy.

For the curriculum planners, the findings of the study will help the curriculum planners to realize the roles and benefits of using concept mapping instructional strategy as a method for teaching Economics. This is hoped to motivate the curriculum planners to lay better emphasis on concept mapping instructional strategy as a method for teaching Economics, if concept mapping instructional strategy method is proved to be better, when next senior secondary school Economics curriculum is to be reviewed.

## **Scope of the Study**

This study will be conducted in all the public senior secondary schools in Awka Education Zone of Anambra State. The content of the study will cover the achievement and interest of senior secondary school Economics students taught using concept mapping instructional strategy and those taught Economics using lecture method. The scope also includes the influence of gender and location on students' achievement and interest in Economics when taught using concept mapping instructional strategy.

## **Research Questions**

The following research questions will guide the study.

- 1) What is the difference in mean achievement scores of students taught Economics using concept mapping instructional strategy and those taught Economics using lecture method?
- 2) What is the difference in mean interest scores of students taught Economics using concept mapping instructional strategy and those taught Economics taught using lecture method?
- 3) What is the influence of gender on mean achievement scores of students taught Economics using concept mapping instructional strategy?
- 4) What is the influence of gender on mean interest scores of students taught Economics using concept mapping instructional strategy?
- 5) What is the influence of location on mean achievement scores of students taught using concept mapping instructional strategy?
- 6) What is the influence of location on mean interest scores of students taught using concept mapping instructional strategy?

## Hypotheses

The following null hypotheses will be tested at 0.05 level of significance.

- H0<sub>1</sub>:** There is no significant difference in mean achievement scores of students taught using concept mapping instructional strategy and those taught using lecture method.
- H0<sub>2</sub>:** There is no significant difference in mean interest scores of students taught using concept mapping instructional strategy and those taught using lecture method.
- H0<sub>3</sub>:** There is no significant difference in the mean achievement scores of male and female students taught using concept mapping instructional strategy.
- H0<sub>4</sub>:** There is no significant difference in the mean interest scores of male and female students taught using concept mapping instructional strategy.
- H0<sub>5</sub>:** There is no significant difference in the mean achievement scores of urban and rural students taught using concept mapping instructional strategy.
- H0<sub>6</sub>:** There is no significant difference in the mean interest scores of urban and rural students taught using concept mapping instructional strategy.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

Literature was reviewed under the following sub-headings;

#### **Conceptual Framework**

Concept of concept mapping

Concept and objectives of Economics

Concept of achievement

Concept of interest

Concept of gender

Concept of location

#### **Theoretical Framework**

Constructivism (Vgotsky, 1987)

#### **Review of Empirical Studies**

Studies on students' academic achievement in Economics

Studies on students' interest in Economics

Studies on students' achievement and interest in terms of gender

Studies on students' achievement and interest in terms of location

#### **Summary of Literature Review**

## **Conceptual Framework**

### **Concept of concept mapping**

Concept mapping was developed by Novak in 1972 when he sought to follow and understand changes in children's knowledge of science. A concept map is a diagram showing the relationships among concepts. It is a graphical tool for organizing and representing knowledge. In fact, these are instruments that help with organizing and structuring knowledge. Conceptual maps are very effective; it let students represent their understanding of domain knowledge in a well-organized format.

A concept map is a visual organizer that can enrich students' understanding of a new concept (Birbili, 2007). Using a graphic organizer, students think about the concept in several ways. Most concept map organizers engage students in answering questions such as, what is it? What is it like? What are some examples? Concept maps deepen understanding and comprehension. Essentially, concept mapping is a structured process focused on a topic or construct of interest involving input from one or more participants that produces an interpretable pictorial view of their ideas and concepts and how these are interrelated (Yusuf, 2009). Concept mapping helps people to think more effectively as a group without losing their individuality. It helps groups to manage the complexity of their ideas without trivializing them or losing detail (NTI, 2009). Concept mapping is a powerful but simple way of using diagrams to show information in the same way one thinks. Concept mapping makes it easy to understand, remember, and communicate complex information. Sometimes our brains feel as if they are scrambled because of information overload, overwhelm, or ineffective use of the brain. This leads to:

- inability to solve problems effectively,

- lack of creative thought,
- lack of focus,
- difficulty giving great presentations,
- problems organizing one's thoughts,
- poor communication,
- missing out tasks when planning projects,
- forgetting important information

Concept mapping is one of the newest instructional approaches developed by Novak. It is a process of organizing information or knowledge in form of maps as two-dimensional diagram that consists of concepts or nodes linked by labeled lines to show relationships between and among those concepts. According to Novak (1990) concept mapping makes learning easier and easily understandable. Concept map according to Novak and Godwin (1994) is one of the tools or methods which provide motivation to the learner for meaningful learning to take place. Maps are sketch representing an idea or concept. In Geography maps represent on a paper, an area, country etc showing the towns, cities, rivers, mountains etc. It also shows the distances between towns and the connections from town to town on roads, railways etc. In education, concept maps according to Wandersee (2000) are a construct of a bounded graphic representation that corresponds to a perceived reality. Just as geographic maps, concept map shows sketch of concepts and it uses prepositions to show the direction and relationship among the concepts. Hence, Godwin (2004) described concept map as a schematic device for representing set of concept meanings in a frame work of prepositions. They also described it as a hierarchical representation of concepts. This means that concepts are arranged on a paper, from general to specific, relating one concept to another by use of linking prepositions. The major concept is

differentiated from the subordinate ones by use of squares to bind it. The supper-ordinate and sub-ordinate concepts are bounded with circles, while the examples are bounded with eclipses.

Linking prepositions are formulated in a simple way which gives meaning to the map and makes for easy understanding of the map. The understanding of the learner and the interest which this understanding builds provide a structure into which the new concept to be learnt can be integrated into the learned concepts that the learner already possessed. That was why Novak (1990) stated that concept mapping has become an important tool to help students learn to learn meaningfully and to help teachers become more effective teachers. Concept mapping is showing a map, or making a map.

Concept mapping as stated by Novak has various uses. It is used as advance organizer and it can be used as a powerful evaluation tool. The students construct maps to show the summary of what they have been taught. The teacher goes through their maps and then determines whether the student has learnt what he /she taught them. The students can also use their maps to evaluate their understanding to what they have been taught. It can be used to show prior knowledge about a given topic. The teacher asks the students to concept map a topic before he/she goes into the teaching. The teacher at the end of the lesson can construct a concept map or display an already constructed map to summarize a lesson. The students at the end of the lesson can also construct a map to show the understanding and retention of what they have learnt.

### **Concept of Economics**

The term Economics comes from the Ancient Greek οἰκονομία from οἶκος (oikos, "house") and νόμος (nomos, "custom" or "law"), hence "rules of the house (hold for good management)" (Mark, 2010). 'Political economy' was the earlier name for the subject, but economists in the late 19th century suggested "Economics" as a shorter term for "economic

science" to establish itself as a separate discipline outside of political science and other social sciences (Peters, 2011).

Economics is the social science that studies economic activity to gain an understanding of the processes that govern the production, distribution and consumption of goods and services in an economy (Igwe, 2009). Economics is the study of the production and consumption of goods and the transfer of wealth to produce and obtain those goods (Ukaiwe, 2013). Economics explains how people interact within markets to get what they want or accomplish certain goals. Since Economics is a driving force of human interaction, studying it often reveals why people and governments behave in particular ways.

Economics, according to Newman (2009), is the study of production and distribution of goods and services. Harwood (2011) maintained that Economics is the study of utilization of scarce resources for maximization of profit and satisfaction. The study and by implication the knowledge of Economics as a school subject is very crucial for effective, productive and useful human living (Ukpan, 2010). This is because Economics inculcates in the learner the skills for effective production and distribution of goods and services, as well as the skills to minimize expenses and at the same time maximize income.

Economics is concerned with human behaviour such as how people earn their living and make a choice between alternatives to satisfy their wants. It focuses on the study of firms and the government whose activities are geared to the production of goods and services for the satisfaction of human want since economics is concerned with human behaviour. So economics is a social science, and like any science subject, the reasoning procedure in economics is methodological, its analysis is systematic, and the validity of its various theories can be tested.

Thus an attempt has been made to integrate the theoretical foundations of the subject with their practical applications. Economics is one of the electives or group of subjects expected to be studied at the Senior Secondary School (SSS) level under the new National Policy on Education. This curriculum according to Osunnaiye (2005) has been designed by the Comparative Education Study and Adaptation Centre (CESAC) to meet the requirements of Economics in the new system.

The guiding principle of this curriculum is the need to equip graduates of the Senior Secondary School with the basic knowledge and skills that will enable them to better appreciate the nature of economic problems in any society. In the light of this philosophy, the following are the set objectives for the Economics course:

- (i) To equip students with the basic principles of Economics necessary for useful living and for higher education,
- (ii) To prepare and encourage students to be prudent and effective in the management of scarce resources
- (iii) To raise students respect for the dignity of labour and their appreciation of economic, cultural and social values of our society and
- (iv) To enable students acquire knowledge for the practical solution of the economic problems of society; Nigeria, developing countries and the world at large.

According to Obemeata (1991) the importance of economics education to any nation, is very clear. It enables both leaders and citizens to understand basic economics concepts, principles as well as to understand, appreciate and seek to improve the economic situation for their own social good. The understanding of economics is a pre-requisite for good citizenship. To him the principal objective for teaching economics should be to provide economics

understanding necessary for responsible citizenship. Being a responsible citizen involves the ability to take rational decision on important economic issues with a good basis for doing so. Furthermore, Obemeata (1991) stated that the position of economics in secondary school curriculum has been strengthened because it has been accepted that it has some civil values because of some topics as "the element and determinants of national income, the structure and activities of labour unions, the working and influence of financial institution. These prepared one adequately for life in modern society.

According to Adu (2002) the study of economics serves a useful purpose in modern life. It gives us facts and shows us what may be expected to be the outcome of certain lines of conduct; it helps us to decide which of several alternatives to choose. It charged its recipient to make wise choice that will satisfy their needs in the presence of unlimited wants and resources. Obemeata (1991) says economics as a subject has various values to the learners and these values according to him include;

- i) The Cultural Values: - Economics has some intrinsic value that makes it appealing as a school subject for example: there is a great logic in it. It connects learners to the essentials of everyday life and it is also concern with almost tropical events such as International Monetary Fund [IMF], Structural Adjustment Programme [SAP] and so on. Please and justify the above assertion in your own understanding
- ii) Intellectual Training: - Economics also contribute to intellectual training because it involves looking at issues in a way which foremost new to people. Economics is not primarily a body of knowledge, it is a method rather than a doctrine, an apparatus of mind, a technique of thinking which helps its possessors to draw correct conclusion

iii) Vocational Training: - The vocational nature of economics made it readily acceptable to students. Economics as a subject is of direct utility in many branches of industries and commerce. It is also an essential part of most professional examination like Banking, Accountancy, and Secretariat.

Economics focuses on the behavior and interactions of economic agents and how economies work. Consistent with this focus, primary textbooks often distinguish between microeconomics and macroeconomics. Microeconomics examines the behavior of basic elements in the economy, including individual agents and markets, their interactions, and the outcomes of interactions. Individual agents may include, for example, households, firms, buyers, and sellers. Macroeconomics analyzes the entire economy (meaning aggregated production, consumption, savings, and investment) and issues affecting it, including unemployment of resources (labor, capital, and land), inflation, economic growth, and the public policies that address these issues (monetary, fiscal, and other policies).

Other broad distinctions within Economics include those between positive Economics, describing "what is," and normative Economics, advocating "what ought to be"; between economic theory and applied Economics; between rational and behavioral Economics; and between mainstream Economics (more "orthodox" and dealing with the "rationality-individualism-equilibrium nexus") and heterodox Economics (more "radical" and dealing with the "institutions-history-social structure nexus").

Besides the traditional concern in production, distribution, and consumption in an economy, economic analysis may be applied throughout society, as in business, finance, health care, and government. Economic analyses may also be applied to such diverse subjects as crime,

education, the family, law, politics, religion, social institutions, war, and science; by considering the economic aspects of these subjects. Education, for example, requires time, effort, and expenses, plus the foregone income and experience, yet these losses can be weighed against future benefits education may bring to the agent or the economy. At the turn of the 21st century, the expanding domain of Economics in the social sciences has been described as economic imperialism. The ultimate goal of Economics is to improve the living conditions of people in their everyday life. The focus of this study is to evaluate the implementation of senior secondary school Economics curriculum.

### **Concept of Achievement**

The definition of academic achievement varies among educators, policymakers and other educational stakeholders. Academic achievement is the outcome of education — the extent to which a student, teacher or institution has achieved their educational goals (Ezeudu, 2006). Achievement may be defined as the successful performance of a task. Oxford Advanced Learner's Dictionary (2000) defined achievement as a thing that somebody has done successfully especially using his/her own efforts and skills. According to Merriam Webster's Collegiate Dictionary (2001), achievement is an act of achieving a result gained by efforts, the quality and quantity of student's work. According to Dictionary of Education (2008), academic achievement is a measure of knowledge gained through education process usually indicated by test scores, grade point average and degree.

According to Nwagbo (2013) academic achievement can be defined as anything a person excelled in with their education. Academic achievement could be getting high grades and a high grade points average (GPA) level. Academic achievement is commonly measured by

examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important — procedural knowledge such as skills or declarative knowledge such as facts (Eze, 2010). In the context of this study, academic achievement means learning outcome which has to do with the knowledge attained from teaching process, which helps to show the extent students have learnt a given content.

Achievement is the process of achieving something or something that has been achieved especially by means of skill or perseverance. Its tests are designed to measure the outcome of level of accomplishment in a specified programme of instruction in a subject area or occupation, which a student had undertaken in the recent past. Achievement is basically a measure of performance of an individual in school subject as symbolized by score or mark on an achievement test. According to Anene (2005) achievement is quantified by measure of the student's academic standing in relation to those of other students of his age. The term achievement refers to the degree or the level of success attained in some specific school tasks especially scholastic performance. Academic achievement generally indicates the learning outcomes of pupil. It measures the knowledge acquired in subject taught and it is usually measured by test scores or by marks assigned by the teacher or both.

Achievement tests measure the extent to which a person has achieved something, acquired certain information, or mastered certain skills usually as a result of planned instruction or training. It is designed to efficiently measure the amount of knowledge and skill a person has acquired, usually as a result of class room instruction.

It is also a test of developed skill or knowledge. The most common type of achievement test is a standardized test developed to measure skills and knowledge learned in a given grade

level, usually through planned instruction, such as training or class room instruction. Achievement test are often constructed with test that measure aptitude, a more general and stable cognitive trait.

Achievement tests are constructed so as to assess what a student can do, which he had been exposed to. To this extent, achievement test dwells on well specified content areas. These have to be adequately sampled, by items of suitable statistical properties. Achievement test scores are used in a educational system to determine what level of instruction for which a student is prepared. High achievement scores usually indicate a mastery of grade level material and the readiness of advanced instruction. Low achievement scores can indicate the need for remediation or repeating a course grade.

Construction of a valid and reliable achievement test in various subject areas has not been given attention in the senior secondary schools in Nigeria. It is expected that the schools should have enough valid and reliable achievement tasks for assessing their students when they have covered the curriculum content areas as well as to prepare them for external examination (Osadebe, 2012). The use of poorly designed Economics achievement test is a major problem as it affects students' interest achievement in economics.

It has already been pointed out that poorly designed achievement test can make the student lose interest in a particular subject (Osadebe, 2012) Onumkwo (2008) observed that most examiners find it easier to construct achievement test items in the lower cognitive levels than the higher cognitive levels which goes at the fact that most of these examiners who are teachers in junior and senior secondary schools have been constructing achievement test that are not highly valid, which is a problem. However construction of test items is an art that only few people seem

to master (Nunnally & Osadebe 2001). It takes a professionally trained examiner to set an achievement test that will really cover cognitive, affective and psychomotor domains of education. Therefore there is urgent need for experts to construct enough valid and reliable achievement tests for use in senior secondary school Economics.

### **Concept of Interest**

Interest, according to Adam (2010), means attention to something. Furthermore, Adeleye (2011) views interest as the curiosity to do something. In the context of this study interest means the curiosity to study social studies. The application of curiosity in studying social studies by students could enhance their performance in junior secondary school social studies.

Interest, according to Agbo (2002) increases students' success in the learning tasks. Interest is an important variable in learning because when one becomes interested in an activity; one is likely to be more deeply involved in the activity (Imoko & Agwagah, 2006). According to Harbor-Peters (2001), interest is a subjective feeling of concentration or curiosity over something. Adedeji (2007) stated that interest is activity which tends to increase the likelihood that individuals formulate goals relating to that activity and invest more time and effort to achieve them. In the context of study, interest is a motivational drive to action, towards a person, or anything.

Interest is a tendency to choose one activity in reference to another, or to seek out an activity or object. It implies preferences or likes and dislikes for specific activity or a group of specific professions such as lawyer, physician, economist accountant, artist etc. Interest is a preference for a particular activity. It provides emotional pleasure.

Interest, as an important motivational construct that influences students' engagement and achievement in learning, may be regarded as a highly specific type of attitude that influences the choice of a particular phenomenon or to be favourably inclined to attend to it and give time to it. Renninger (2006) assert that the level of a person's interest has repeatedly been found to be to be a powerful influence in learning. Interest is persistent tendency to pay attention and enjoy some activities. Interest has been viewed as emotionally oriented behavioural trait which determines a student's vim and vigour in tackling educational programmes or other activities. Hidi and Renninger (2006) were of the view that interest influences students' attention, goal, and level of learning. Interest is an activity or subject that a person enjoys and spends free time doing or studying. Interest belongs to affective domain of educational objective but it also has a cognitive component. It has a strong influence on individuals' cognitive and affective functioning (Renninger 2000). Early Years Learning Framework (2009) noted also that interest is an important part of teaching and learning. Students learn better when they are interested and engaged in the area of their interest. Students' interest forms a basis for curriculum decision making and method of delivery of instruction.

Interest is also defined by Typhoon International Corp (2004) as the attention with a sense of concern; lively sympathy or curiosity; and the power to excite or hold such attention (in something). Interest plays great role in the field of psychology as some recent research works have found that it is closely related with personality, motivation, cognition, development, emotion, vocations, aesthetics, behaviour, hobbies, reasoning, and information processing (Silvia 2004). A few works have found interest to be factor that partly influences reading and text processing as a text with the feature of coherence, vividness, ease of comprehension, and concreteness tends to arouse greater interest of the audience than a text without such features.

There is evidence that seductive details of interest have detrimental effect as it impairs comprehension; interest promotes comprehension and memory for several reasons: interest increases attention to a text; interest makes people process a text more deeply; and interest promotes good meta-cognitive strategy (Silva, 2006)

Interest could be seen as a “psychological state of engagement, experienced in the moment and also a predisposition to engage repeatedly in particular idea, events, or objects over time” (Paul 2014). Interest simultaneously diversifies one’s experience and focuses his experience; leading him to pay attention to only certain things and not some other things that tends to stimulates the person’s attention. It serves as a drive towards the new, edgy, and the exotic. Both the urge to approach or engage in certain events and the urge to avoid some events lie in the realm of interest (Kpolovie, Joe & Okoto, 2014).

Interest test means psychological tests to assess a person’s interest and preference. These are used primarily for career counselling. Its tests include items about activities from among which applicants select their preferences. The rationale is that if a person exhibits the same pattern of interests and preferences as people who are successful in a given occupation, then the chances are high that the person taking the test will find satisfaction in that occupation. If a learner shows interest in a certain area of study (Economics) there is every tendency that he will understand the concepts easily. However Fisher, Dobbs-Oates, Doctoroff, and Arnold (2012) are of the persuasion that specific interest in a subject is an important determinant for a successful learning and academic achievement. Psychologists over the years are of the opinion that the academic achievement of a student is based on cognitive abilities but, a study recently conducted by Tinio (2009) found a very strong correlation between interest and academic achievement.

Ngwoke (2004) also emphasized that the higher the interest of the student to learning the higher the possibility of achievement in the subject taught.

### **Concept of Gender**

Gender is not biologically but culturally based. It is the cultural role expected of people which helps in the classification of individuals into male and female. According to Lee (2001), gender is an ascribed attribute that differentiates feminine from masculine socially. Gender is seen as the categorization in the world of matter into sex. Similarly, Kalusi (2000) viewed gender as a cultural construction that assigns roles, attitude and values considered appropriate for each sex. Ekeh (2000) equally noted that gender implies that Character of being male or female, man or women, boy or girl. According to Offoma (2004) and Robert (2007) gender is a learned socially constructed condition ascribed to male and female. Offoma noted further that gender is enforced through cultural practices as gender identity is the outcome of cultural learning, thus the expectations from male and female are depended on their cultural milieus.

Some authors like Kalusi (2000) used gender and sex interchangeably, while others like Robert (2007) differentiated between the two. According to Robert (2007), sex is an inborn physiological condition that makes individuals to be either male or female. According to Oraifo (2000) noted that sex is based on biological and physical differences between male and female while gender refers to cultural understanding about what constitutes masculinity and femininity in a society. Hence, while sex is biologically defined, gender is socially defined. In the same vein, Akubuokwu (2004) stated that being a male or female is a matter of sex, but to be masculine or feminine is a matter of gender. It is noteworthy that masculinity refers to attributes considered appropriate for male such as being aggressive, athletic, physically, active, logical and dominant

in social relation with female. On the other hand, femininity refers to attributes traditionally with appropriate behaviour for female such as docility, fragility, emotionality and subordination to man. According to Udegbe (2003) gender differences are created and sustained by society through its traditions, customs, conventions, mores and regulations. The above assertion is in support of the argument of Western Feminists, as reported by Thompson and Hickney (2004), that the differences between women and men lie in the culture and not in nature.

Gender is nurtured and therefore, subject to cultural influence and interpretation as well as limitations. It refers to a person's subjective feeling as "masculine" or "feminine", irrespective of the person's sex. It is generally concerned with attitude, behaviour, values, and roles among others that describe the role model individuals play in the social and cultural context. It explains the peculiar genetic traits exhibited by or assigned to men and women that are established in the families, societies and cultures. Generally, apart from procreation which nature assigns specific roles to male and female respectively, other personality traits, attitudes, behaviours, values, relative power, influence, roles and expectations are greatly influenced by social and cultural milieu of the society. For instance, depending on the social and cultural milieu of the society, a biologically dictated female can perform the masculine functions, and male carrying out the role of feminine irrespective of their biological sexes (e.g Nigerian culture allows only men to climb palm trees to tap the palm wine and harvest the fruits, while in the western culture, the equivalence of palm tree-climbing is the electrical engineering field work, where women use belts to climb poles for wiring). The present study intends to determine if, the above diverse role model and expectations of males and females in the society have any influence on students' achievement and interest in Economics when taught using concept mapping instructional strategy in Awka Education Zone of Anambra State.

## **Concept of Location**

Location refers to a site, situation or position. Geographically, location refers to a place or an area having compass bearing and distinct boundaries. It could also mean a place where something or person resides in the world. In the same vein, Benton (2000) defined location as a geographical place or an area. It can also mean a settlement whether a village, town or city usually inhabited by human beings. The status of a location whether rural or urban depends on the size, infrastructures, population distribution among other things usually, considerable human population, infrastructures such as school, good roads, and hospital characterizes urban location than rural location.

Several Places especially villages, towns and cities in Nigeria are still grossly underdeveloped. Under development in Nigeria is as a result of socio-economic factors among other factors. This has resulted to poor academic standard and low standard of living especially in the rural areas. For example, a survey conducted in a study of Ogunniyi (2008) revealed that there are problems of lack of instructional facilities, poor attitude to teaching and inadequate teachers in rural areas. This has resulted to lack of motivation among teachers and poor academic achievement of students in school. This study sought to find out among other things if the problem of poor attitude to teaching and inadequate teachers in the rural areas could influence students' achievement and interest in Economics when taught using concept mapping instructional strategy in Awka Education Zone of Anambra State.

## **Theoretical Framework**

### **Constructivism Theory (Vgotsky, 1987)**

Constructivism is a theory of knowledge that argues that human beings generate knowledge and meaning from an interaction between their experiences and their ideas. Piaget called these systems of knowledge schemata. Constructivism, an educational theory developed by Seymour Papert, inspired by constructivist and experiential learning ideas of Jean Piaget. Piaget's theory of constructivist learning has had wide ranging impact on learning theories and teaching methods in education and is an underlying theme of many education reform movements. Research support for constructivist teaching techniques has been mixed, with some research supporting these techniques and other research contradicting those results.

Formalization of the theory of constructivism is generally attributed to Jean Piaget, who articulated mechanisms by which knowledge is internalized by learners. He suggested that through processes of accommodation and assimilation, individuals construct new knowledge from their experiences. When individuals assimilate, they incorporate the new experience into an already existing framework without changing that framework. This may occur when individuals' experiences are aligned with their internal representations of the world, but may also occur as a failure to change a faulty understanding; for example, they may not notice events, may misunderstand input from others, or may decide that an event is a fluke and is therefore unimportant as information about the world. In contrast, when individuals' experiences contradict their internal representations, they may change their perceptions of the experiences to fit their internal representations.

According to the theory, accommodation is the process of reframing one's mental representation of the external world to fit new experiences. Accommodation can be understood

as the mechanism by which failure leads to learning: when we act on the expectation that the world operates in one way and it violates our expectations, we often fail, but by accommodating this new experience and reframing our model of the way the world works, we learn from the experience of failure, or others' failure.

It is important to note that constructivism is not a particular pedagogy. In fact, constructivism is a theory describing how learning happens, regardless of whether learners are using their experiences to understand a lecture or following the instructions for gaining the understanding. In both cases, the theory of constructivism suggests that learners construct knowledge out of their experiences.

However, constructivism is often associated with pedagogic approaches that promote active learning, or learning by doing. The above theory is relevant as an anchorage theory to this study. The theory holds that the learners make meaning of what is taught in the classroom when they are given the opportunity to participate actively in the learning process. Concept mapping instructional strategy on the other hand gives the learners the opportunity to be involved actively in the learning process. Thus, the outcome of this study will help to strengthen the view of the constructivism theory.

## **Review of Empirical Studies**

### **Studies on Students' Achievement in Social Studies**

Eke (2004), carried out a study on the effect of concept mapping on students achievement and retention in social studies. The study was conducted in Afikpo education zone of Ebonyi State. A total number of one hundred and forty (140) students sample from four intact classes was used for the study. Students' achievement test in social studies and students' retention test in social studies was used for data collection. Mean and standard deviation were used to answer the

research questions while t-test was used to analyze the research hypotheses. The findings of the study among other things showed that the concept mapping significantly improve students' achievement and retention in social studies. The study recommended efficient and effective use of concept mapping in teaching social studies.

Yearwood (2005) conducted a study on the effect of concept mapping teaching method on students' achievement in social studies. The study was carried in senior secondary schools in Bayelsa State of Nigeria. The study used one hundred and thirty senior secondary school students as the population of the study. The instrument used for data collection was social studies achievement test. The instrument was developed by the researcher and validated by experts. Data collected were analyzed using mean and standard deviation while the research hypotheses were analyzed using t-test. The major finding of the study was that concept mapping instructional strategy influenced students' achievement in social studies. The study among other things recommended the use of innovative teaching strategy as concept mapping in teaching social studies.

Zollman and Robert (2008) conducted a study in Switzerland on the effect of concept mapping on students' achievement in social studies. The study involved two hundred (200) high school students. Achievement test in social studies instrument constructed by the researchers and validated by experts was used for data collection. The data collected were analyzed using mean and standard deviation while the hypotheses were analyzed using analysis of variance (ANOVA). The major finding of the study was that the use of concept mapping instructional strategy significantly improves students' achievement in social studies. The study recommended adequate use of concept mapping instructional strategy in teaching of social studies in Switzerland schools.

Abdullahi (2010) carried out a study on the effect of concept mapping on students' achievement in social studies. The study was conducted in junior secondary schools in Kafanchan area of Kaduna State. The study made use of one hundred and fifty (150) students. Achievement test in social studies developed by the researcher and validated by experts was used for data collection. Mean and standard deviation were used for data analyzed in order to answer the research questions while t-test was used to analyze the research hypotheses. The findings of the study among other things showed that the use of concept mapping instructional strategy increased students' achievement in social studies. The study recommended the use of concept mapping instructional strategy in teaching social studies in schools.

The above empirical studies appear to show that students' academic achievement improved when innovative instructional strategy such as concept mapping is used in teaching. Thus, there is need to conduct such study in Awka Education Zone of Anambra State where students' achievement in social studies is low.

### **Studies on students' interest in social studies**

Oghene (2007) conducted a study on the effect of project method instructional strategy on students' achievement and interest in HIV/AIDS contents in biology. The study was conducted in Agbor education zone of Delta State. The study adopted quasi-experimental research design. The study used two experimental groups and two control groups. The study sampled two hundred (200) senior secondary school biology students. Biology achievement test (BAT) and biology interest scale were used as instruments for data collection. Treatment was administered to the experimental groups while the control groups were taught without treatment. The data collected were analyzed using mean and standard deviation and analysis of variance (ANOVA). The result of the study among other things showed that project method instructional strategy has

significant difference on students' interest in HIV/AIDS contents in senior secondary school biology. The study recommended among other things that senior secondary school biology teachers should incorporate project method in the teaching of HIV/AIDS contents in biology.

Ibuzu (2007) conducted a study on the effect of pictorial instructional materials on students' achievement and interest in Health and Physical Education. The study was conducted in Asaba education zone of Delta State. The study adopted quasi-experimental research design. The study used two experimental groups and two control groups. The study sampled four hundred (400) senior secondary school Health and Physical Education students. Health and Physical Education Achievement Test (HEAT) and Health and Physical Education interest scale were used as instruments for data collection. The researcher taught the experimental groups using pictorial materials while the control groups were taught without pictorial materials. The data collected were analyzed using mean and standard deviation and analysis of variance (ANOVA). The major finding of the study was that pictorial instructional materials have significant difference on students' interest in senior secondary school Health and Physical Education. The study recommended among other things that senior secondary school Health and Physical Education teachers should always use pictorial instructional materials in teaching Health and Physical Education.

John (2007) conducted a study on the effect of concept mapping instructional strategy on students' interest in Health and Physical Education. The study was conducted in Benin education zone of Edo State. The study adopted quasi-experimental research design. The study used two experimental groups and two control groups. The study sampled three hundred (300) senior secondary school Health and Physical Education students. Health and Physical Education interest scale was used as instruments for data collection. The researcher used concept mapping in

teaching the experimental groups while the control groups were taught without using concept mapping. The data collected were analyzed using mean and standard deviation and analysis of variance (ANOVA). The major finding of the study was that concept mapping instructional strategy has significant difference on students' interest in senior secondary school Health and Physical Education. The study recommended among other things that senior secondary school Physical and Health Education teachers should always use concept mapping instructional strategy in teaching Physical and Health Education.

### **Studies on Students' Achievement and interest in terms of Gender**

Okebukola (2005) carried out a study on the influence of gender on Junior Secondary school students' academic achievement and interest in Basic Science using cooperative learning teaching strategy. Total number of one hundred and twenty (120) students obtained from four intact classes of the three selected Junior Secondary Schools in the three selected Local Government Areas of Ogun State, participated in the study. This study employed a quasi-experimental design. Achievement Test for Basic Science Students (ATBSS) and Basic Science Interest Scale were the instruments used to collect the relevant data. The data collected were analyzed using mean and standard deviation while t-test was used to analyzed research hypotheses. Findings of this study revealed that there was significant difference in academic achievement and interest of male and female students at the pretest and posttest levels respectively in favour of male students. The study recommended that in order to encourage more women into pure sciences, and science-oriented courses, interventions need to be designed that focus not only on the academic achievement of girls but also on how to make science-related occupations more interesting for young, high achieving girls.

Ezeugwu (2007) conducted a study on the effect of collaborative learning method on students' achievement and interest in mathematics. The study was carried out in Nsukka education zone of Enugu State. The study involved a total population of two hundred (200) senior secondary two (SS2) students. Mathematics achievement test and mathematics interest scale instruments developed by the researcher and validated by experts was used for data collection. The data collected were analyzed using mean and standard deviation while the research hypotheses were tested using t-test. The study found out among other things that there is no significant difference in male and female students' achievement and interest in mathematics when exposed to the same teaching method. The study recommended the use of collaborative teaching method in teaching mathematics.

Gilbert (2009) conducted a study on the effect of concept mapping teaching method on the academic achievement and interest of students in chemistry in Etche Local Government Area of Rivers State. The study involved one hundred and fifty (150) senior secondary two (SS2) students. Chemistry achievement test and Chemistry Interest Scale instruments developed by the researcher and validated by experts was used for data collection. The data collected were analyzed using mean and standard deviation while t-test was used to test the research hypotheses. The study found out that there is no significant difference in male and female students' achievement and interest when exposed to the same teaching method.

Ekwe (2013) carried out a study on the effect of simulation teaching method on students' achievement and interest in biology. The study was conducted in Nsukka education zone of Enugu State. Three hundred (300) senior secondary two (SS2) students were involved in the study. Biology achievement test as well as Biology Interest Scale instruments developed by the researcher and validated by experts was used for data collection. The data collected were

analyzed using mean and standard deviation to answer the research questions while t-test was used to test the hypotheses. The findings of the study showed that there is no significant difference in male and female students' achievement in biology when exposed to the same teaching method.

Furthermore, a study conducted by Madu (2004) on the effect of peer tutoring method on students' achievement and interest in physics showed that there is a significant difference in male and female students' achievement and interest in physics in favour of male students when exposed to the same teaching method. Similarly, Ezeudu (2006) conducted a study on the effect of concept mapping teaching method on students' achievement and interest in chemistry. The study was conducted in Nsukka education zone of Enugu State. The findings of the study among other things showed that the male students obtained higher achievement and interest mean compare to their female counterpart Physics.

Eze (2010) carried out a study on the effect of collaborative teaching method on students' achievement and interest in English Language in Umuahia education zone of Abia State showed that there is a significant difference in male and female students' achievement and interest in favour of female students in English language. Nwagbo (2013) in a study on the effect of concept mapping strategy on students' achievement and interest in Integrated Science found out that there is a significant difference in male and female students' achievement and interest in Integrated Science in favour of female.

The above studies showed that some studies reviewed showed that there is no significant difference in male and female students' academic achievement and interest when exposed to the same teaching method while some other studies showed that there is a significant difference in the male and female students' academic achievement and interest. Thus, the issue of influence of

gender on students' academic achievement and interest has not been settled. Therefore, this study amongst other things intends to find out the influence of gender on students' academic achievement and interest in social studies when taught using concept mapping strategy.

### **Studies on students' achievement and interest in terms of location**

Adebisi (2008) conducted a study on the effect of concept mapping instructional strategy on students' achievement and interest in some contents of senior secondary school biology. The study was conducted in Oshogbo education zone of Osun State. The study adopted quasi-experimental research design. The one experimental group and one control group was use for the study. The study sampled three hundred (300) biology students. Biology achievement test (BAT) and Biology Interest Scale (BIS) were used as an instrument for data collection. The experimental group was taught using concept mapping while the control group was taught without concept mapping. The data collected were analyzed using analysis of variance (ANOVA). The result of the study showed that concept mapping instructional strategy has significant influence on students' achievement and interest in some selected contents in senior secondary school biology. The study also found out that location has significant difference on students' achievement and interest in biology. The study recommended regular use of concept mapping in the teaching of contents in biology.

Chukwu (2009) conducted a study on the influence of location on students' achievement and interest in some contents of junior secondary school social studies. The study was conducted in Ezeagu education zone of Enugu State. The study adopted quasi-experimental research design. The students were grouped into two which is made of urban and rural groups. The study sampled two hundred (200) junior secondary school social studies students. Social Studies Achievement Test (SOSAT) and social studies interest scale were used as instruments for data collection. Both

the urban and rural students were taught the same selected contents in social studies curriculum. The data collected were analyzed using mean and standard deviation and analysis of variance (ANOVA). The major finding of the study was that location has significant influence on students' achievement and interest in some contents in junior secondary school social studies. The study recommended among other things that junior secondary school social studies teachers should always put the location of students in perspective in classroom instructional delivery.

Adeji (2011) conducted a study on the influence of location on students' achievement and interest in senior secondary school biology. The study was conducted in Oshogbo education zone of Osun State. The study adopted quasi-experimental research design. The students were grouped into two which is made of urban and rural groups. The study sampled four hundred (400) junior secondary school biology students. Biology Achievement Test (BAT) and Biology interest scale were used as instruments for data collection. Both the urban and rural students were taught the same contents in biology curriculum. The data collected were analyzed using mean and standard deviation and analysis of variance (ANOVA). The major finding of the study was that location has significant influence on students' achievement and interest in senior secondary school biology. The study recommended among other things that senior secondary school biology teachers should always put the location of students in perspective in classroom instructional delivery.

Onuwa (2004) conducted a study on the influence of location on students' achievement and interest in contents in Health and Physical Education. The study was conducted in Okigwe education zone of Imo State. The study adopted quasi-experimental research design. The students were grouped into two which is made of urban and rural groups. The study sampled two hundred (200) students. Health and Physical Education Achievement Test (HEAT) and Health

and Physical Education interest scale were used as instruments for data collection. Both the urban and rural students were taught the same contents in Health and Physical Education curriculum. The data collected were analyzed using mean and standard deviation and analysis of variance (ANOVA). The major finding of the study was that location has no significant influence on students' achievement and interest in contents in Health and Physical Education. The study recommended among other things that teachers should continue to teach Health and Physical Education for the understanding of students notwithstanding their location.

Kalu (2004) conducted a study on the influence of location on students' achievement and interest in contents in biology. The study was conducted in Bende education zone of Abia State. The study adopted quasi-experimental research design. The students were grouped into two which is made of urban and rural groups. The study sampled two hundred (200) senior secondary school biology students. Biology Achievement Test (BAT) and biology interest scale were used as instruments for data collection. Both the urban and rural students were taught the same contents in biology curriculum. The data collected were analyzed using mean and standard deviation and analysis of variance (ANOVA). The major finding of the study was that location has no significant influence on students' achievement and interest in contents in senior secondary school biology. The study recommended among other things that senior secondary school biology teachers should always put location in perspective in classroom instructional delivery.

Nze (2006) conducted a study on the influence of location on students' achievement and interest in junior secondary school social studies curriculum. The study was conducted in Awka education zone of Anambra State. The study adopted quasi-experimental research design. The students were grouped into two which is made of urban and rural groups. The study sampled three hundred (300) junior secondary school social studies students. Social Studies Achievement

Test (SOSAT) and Social Studies interest scale were used as instruments for data collection. Both the urban and rural students were taught the same contents in social studies curriculum. The data collected were analyzed using mean and standard deviation and analysis of variance (ANOVA). The major finding of the study was that location has no significant influence on students' achievement and interest in junior secondary school social studies. The study recommended among other things that junior secondary school social studies teachers should always put location in perspective in classroom instructional materials.

### **Summary of Literature Review**

Literature review was organized under conceptual framework, theoretical framework and review of empirical studies. Conceptually, the concept of concept mapping was discussed extensively. A concept map is a diagram showing the relationships among concepts. It lets students represent their understanding of domain knowledge in a well-organized format. On the other hand, Economics was summarized as the social science that studies economic activity to gain an understanding of the processes that govern the production, distribution and consumption of goods and services in an economy. In addition, the objectives of Economics were presented. Finally, the concepts of achievement, interest, gender and location were discussed.

Literature review under theoretical framework considered constructivism theory of learning. The theory of constructivism suggests that learners construct knowledge out of their experiences. The theory holds that the learners make meaning of what is taught in the classroom when they are given the opportunity to participate actively in the learning process.

Review of empirical studies was organized under studies on students' achievement in Economics; studies on students' interest in Economics; studies on students' achievement and interest in terms of gender; and studies on students' achievement and interest in terms of

location. However, the empirical studies did not show the effect of concept mapping on senior secondary school students' achievement and interest in Awka Education Zone where students' achievement and interest in Economics was low. Hence, the need for this study that seeks to determine the effect of concept mapping instructional strategy on students' achievement and interest in senior secondary school Economics in Awka Education Zone of Anambra State.

## CHAPTER THREE

### RESEARCH METHOD

This chapter presents the procedures adopted for the study. It discusses the Design of the study, Area of the study, Population of the study, Sample and sampling techniques, Instrument for data collection, Validation of instrument, Reliability of the instrument, Research procedure and Research conditions (treatment), and Method of data analysis.

#### **Design of the Study**

The study adopted quasi-experimental research design, precisely pretest-posttest non equivalent group design. Quasi-experimental research design according to Ali (2006) is a research design that does not lay credence to rigorous experimental control. This study was quasi-experimental because intact classes were used hence selection of each subject (research sample) is not randomized. The treatment group and the control group were both given pretest before treatment and a posttest after treatment.

The following symbols explain the above design thus:

$$\begin{array}{ccc} Q1 & X & Q2 \\ \hline Q1 & -X & Q2 \end{array}$$

Where

$Q_1$  = shows test before treatment

$X$  = shows treatment for experimental group

$-X$  = shows no treatment for the control group

$Q_2$  = shows post test (test after treatment)

### **Area of the Study**

The study was carried out in Awka Education Zone of Anambra State. Awka Education Zone of Anambra State is made up of five (5) Local Government Areas namely Awka North, Awka South, Aniocha, Dunukofia, and Njikoka Local Government Areas. Awka Education Zone is bounded in the North by Udi Education Zone of Enugu State, in the south by Onisha Education Zone of Anambra State, in the west by Ogidi Education Zone of Anambra State, and in the East by Nnewi Education Zone of Anambra State. Poor performance of students in senior secondary school Economics in Awka Education Zone of Anambra State which could be as a result of none use of innovative instructional strategies such as concept mapping instructional strategy in teaching and learning Economics motivated the researcher to carry out the study in the area.

### **Population of the Study**

The population of the study consisted of all senior secondary two (SS2) students in Awka Education Zone of Anambra State. The education zone has sixty one (61) senior secondary schools. These schools have population of three thousand six hundred and six (3606) SS2 students with Boys numbering 1493 and Girls numbering 2113; and 1253 of the students are in rural schools while 2353 students are in the urban schools (PPSMB Awka, 2015). The choice of SS2 students anchored on the fact that the class is not preparing for any external examination unlike the SS3 classes, hence are expected to have time for the research.

## **Sample and Sampling Techniques**

The sample size for the study was one hundred and seventy (170) SS2 Economics students in four intact classes from four senior secondary schools that were sampled from the area of the study. Four intact classes were made up of male and female students. Two out of the four selected schools were drawn from urban schools while the remaining two were drawn from rural schools. Simple random sampling technique was used to select two schools from urban and rural areas each. Furthermore, simple random sampling technique was used to select one intact class from each of the four selected schools.

## **Instrument for Data Collection**

Economics achievement test (EAT) and Economics interest scale (EIS) were used for data collection from the respondents. The EAT has 50 multiple choice question items with ABCD alternatives (options). The 50 EAT question items were compiled by the researcher. The EAT was used to evaluate the learning outcome (achievement) of the SS2 students both before and at the end of the instructional treatment (pretest and posttest). The 50 question items were selected by the researcher based on the contents in the SS2 Economics syllabus (i.e money, inflation and deflation) (see appendix B). These topics were chosen because they are complex and can be effectively taught using Concept Mapping. The EAT was developed from the above contents by first constructing a table of specifications/test-blue print (see appendix A). The objectives of the topics (from the selected contents) in SS2 Economics syllabus served as a guide in developing the multiple choice questions. The volume or weight of each topic determined the multiple choice question items that were generated from it. In addition to the EAT, a marking guide (i.e the key that contains the answers to the EAT-50 items multiple choice questions (see

appendix C) and lesson plans (see appendices D & E) were prepared and will be used for the study. Concept mapping of the selected Economics topics (money, inflation and deflation) were developed for the experimental group lesson (see appendix F)

Furthermore, adapted EIS was used to collect data on the interest in Economics. The EIS which was developed by the researcher was divided into two sections A and B. Section A of the EIS contains information on the personal data of the respondents while section B of the EIS contains Economics interest items. The items were structured in line with moderated Likert four point scale of SA= Strongly Agree, A= Agree, Disagree, and SD= Strongly Disagree (see appendix G).

### **Validation of the Instrument**

The economics achievement test (EAT) and economics interest scale (EIS) were validated by three experts. Two from the Department of Social Science Education (Economics unit) and one from the Department of Science Education (Measurement and Evaluation Unit), all from University of Nigeria, Nsukka. The experts did content and face validation of the instruments. This was done by reading through the instruments and removing some variable that do not concern the study, modifications and corrections of some wrong expressions were made on the instrument to make it appropriate for the study. A test-blue print was used to ensure the content validity of the EAT (see appendix I).

### **Reliability of the Instrument**

The two instruments were trial tested using test-retest method. To achieve this, twenty (20) copies of each of the instruments were administered to twenty (20) students in senior secondary schools in Onitsha education zone which is outside the study area but share similar

characteristics with the study area. The instruments were administered to the same twenty (20) students after two weeks. Their responses were analyzed using Pearson Product Moment correlation coefficient. The results indicate a positive correlation coefficient of 0.82 and 0.87 for EAT and EIS respectively (see appendix H).

### **Method of Data Collection**

Data were collected from the four intact classes using the EAT and EIS. The four intact classes were made to cover the same learning contents (money, inflation and deflation). The reason for the choice of money, inflation and deflation is that students appear to be finding these concepts difficult. Four lesson plans were produced for the concept mapping instructional strategy (experimental group). On the other hand, four lesson plans on the same topics (money, inflation and deflation) were produced for the lecture method group (control group). The treatment lasted for four weeks. The researcher made use of the permanent Economics teachers in the sampled schools. The reason for the choice of using the permanent teachers of Economics for the experiment was that if a new teacher other than the regular teachers comes in to teach the students using innovative instructional strategy such as concept mapping, the students may think that something (experiment) is going on and that may affect their achievement and interest in Economics. The permanent teachers that will be used for the experiment classes were properly trained using concept mapping instructional strategy lesson plans (CMISLPs). For the training, the researcher organized the teachers at a fixed venue, date and time and explained the objectives of the study to them. The teachers were made to practice the use of concept mapping in teaching among them before they can actually use it to teach the students. The essence of training the teachers is to ensure uniform instruction towards the validity of the experiment for easy generalization. However, before treatment, both group (experimental and control) were given

pre-test. After the experiment for four weeks and the control group taught the same learning units for four weeks using the lecture method lesson plans, the post-test were administered on both the experimental and control groups of the intact classes. The scores of the experimental group in both pre-test and post-test were recorded and compared with the scores gotten by the control group in both pre-test and post-test.

### **Experimental Procedure**

The pre-test was first administered to both the experimental and control groups before the commencement of treatment. The treatment for the study was the concept mapping instructional strategy lesson plans covering money, inflation and deflation. These economics topics were taught to both groups (experimental and control groups). The experimental group was taught four lessons using concept mapping instructional strategy lesson plans (CMISLPs), while the control group was taught the same four lessons using lecture method lesson plans (LMLPs). Each lesson lasted for 35minutes covering one lesson plan a week. At the end of the treatment (experiment), a post-test was conducted on both groups (experimental and control groups) using the EAT. The scores obtained from the experimental and control groups were compared to determine whether significant difference in the mean achievement scores of students that were taught with concept mapping instructional strategy and those that were taught with lecture method; whether gender influenced students' achievement and interest when students are exposed to concept mapping instructional strategy, and whether location influenced students' achievement and interest when students are exposed to concept mapping instructional strategy.

### **Experimental Condition**

**Experimental Bias:** The permanent Economics teachers were trained and used in the teaching of their students for the experiment. This is to reduce the experimental bias that may arise as a result of change of teachers. The researcher monitored these teachers to make sure that they effectively adhere to instructions of the experiment.

**Teacher Variable:** The researcher trained the regular Economics teachers for one week on the use of concept mapping instructional strategy lesson plans/notes in teaching and allowed them to carry out the experiment under close monitoring. This made the students to feel at home as the experiment goes on without any suspicion of such experiment. This reduced faking of behaviour and any distraction that may result from change of teachers in an experimental condition. This also enhanced students' achievement and interest in the subject matter.

**Initial Group Differences:** There was no randomization of the research subjects in this study. This was to ensure that normal school activities are not disrupted, hence the use of intact classes. Moreover, to guarantee control of initial group differences of the research subjects (samples) in the intact classes, analysis of covariance (ANCOVA) was adopted in analysis of the data. The ANCOVA helped to reduce pretest-posttest effect.

**Effect of Pre-test on Post-test:** The experiment lasted for four weeks. This was long period enough to avoid pre-test effect to post-test achievement. Moreover, the EAT items were reshuffled after the pre-test before the post-test.

### **Method of Data Analysis**

The research questions were answered using mean of the test scores (pre-test and post-test scores) to analyze the achievement of students in Economics. Mean was also used to answer research questions on students' interest in Economics using a mean benchmark of 2.5. Thus, any

item in EIS that obtained mean score below 2.5 was rejected while items that obtained mean score of 2.5 and above were accepted. Analysis of covariance (ANCOVA) was used to test the null hypotheses at 0.05 level of significant.

## CHAPTER FOUR

### PRESENTATION OF RESULTS AND DATA ANALYSIS

The results of the study are presented in line with the research questions that guided the study.

**Research Question One:** What is the difference in mean achievement scores of students taught Economics using concept mapping and those taught Economics using lecture method?

**Table 1:** Showing the difference in mean achievement scores of students taught Economics using concept mapping and those taught Economics using conventional method.

| Group                          | Pre-test  |      | Post-test |       | Mean achievement gain |
|--------------------------------|-----------|------|-----------|-------|-----------------------|
|                                | $\bar{X}$ | SD   | $\bar{X}$ | SD    |                       |
| Concept mapping<br>(Treatment) | 14.11     | 5.21 | 31.67     | 13.59 | 17.56                 |
| Lecture method<br>(Control)    | 14.02     | 5.45 | 20.13     | 8.52  | 6.11                  |

The result in table 1 shows that the pre-test mean achievement score of students taught Economics using concept mapping is 14.11. The standard deviation of pre-test of the students taught Economics using concept mapping is 5.21. The students taught Economics without concept mapping obtained a pre-test achievement mean score of 14.02 and a standard deviation of 5.45. The result further shows that the post-test achievement mean score of students taught Economics using concept mapping is 31.67 and their standard deviation is 13.59. The students taught Economics without concept mapping obtained achievement mean score of 20.13 and a standard deviation of 8.52. The result indicates that the mean achievement gain of students taught Economics using concept mapping is 17.56 while that of students taught Economics without concept mapping is 6.11

**H<sub>01</sub>:** There is no significant difference in mean achievement scores of students taught Economics using concept mapping and those taught Economics using lecture method.

**Table 2:** ANCOVA analysis of the significant difference in mean achievement scores of students taught Economics using concept mapping and those taught Economics using lecture method.

| Source of variation | Sum of square | df  | Mean square | F cal    | F tab |
|---------------------|---------------|-----|-------------|----------|-------|
| Covariates          | -115.4        | -   | -115.4      | -18.5504 |       |
| Explained (R)       | 33.7021       | 2   | 16.85105    | 2.7088   | 2.021 |
| Residual (E)        | 267.4979      | 268 | 6.2209      |          |       |
| Total               | 301.2000      | 268 | 6.6933      |          |       |

The result in table 2 shows that f-cal is 2.7088 while the f-tab is 2.021. Since the f-cal of 2.7088 is more than the f-tab value of 2.021, the null hypothesis one is therefore rejected. This indicates that there is significant difference in mean achievement scores of students taught Economics using concept mapping and those taught Economics using lecture method.

**Research Question Two:** What is the difference in mean interest scores of students taught Economics using concept mapping and those taught Economics using lecture method?

**Table 3:** Showing the difference in mean interest scores of students taught Economics using concept mapping and those taught Economics using lecture method.

| Group                       | Pre-test  |      | Post-test |       | Mean interest gain |
|-----------------------------|-----------|------|-----------|-------|--------------------|
|                             | $\bar{X}$ | SD   | $\bar{X}$ | SD    |                    |
| Concept mapping (Treatment) | 13.39     | 4.91 | 29.63     | 11.44 | 16.36              |
| Lecture method (Control)    | 13.63     | 5.11 | 16.63     | 7.34  | 3.00               |

The result in table 3 shows that the pre-test interest mean score of students taught Economics using concept mapping is 13.39 with a standard deviation of 4.91 while that of students taught Economics without concept mapping is 13.63 with a standard deviation of 5.11. The result further shows that the post-test interest mean score of students taught Economics using concept mapping is 29.63 with a standard deviation of 11.44 while that of students taught Economics

without concept mapping is 16.63 with a standard deviation of 7.34. The result indicates that the mean interest gain of students taught Economics using concept mapping is 16.36 while that of students taught Economics without concept mapping is 3.00

**H0<sub>2</sub>:** There is no significant difference in mean interest scores of students taught Economics using concept mapping and those taught Economics using lecture method.

**Table 4:** ANCOVA analysis of significant difference in mean interest scores of students taught Economics using concept mapping and those taught Economics using lecture method.

| Source of variation | Sum of square | df  | Mean square | F cal   | F tab |
|---------------------|---------------|-----|-------------|---------|-------|
| Covariates          | -66           | -   | -66         | -7.5812 |       |
| Explained (R)       | 24.4719       | 2   | 12.2360     | 2.7088  | 0.686 |
| Residual (E)        | 191.5281      | 268 | 8.7058      |         |       |
| Total               | 216           | 268 | 9           |         |       |

The result in table 4 shows that f-cal is 2.7088 while the f-tab is 0.686. Since the f-cal of 2.7088 is more than the f-tab value of 0.686, the null hypothesis one is therefore rejected. This indicates that there is significant difference in mean interest scores of students taught Economics using concept mapping and those taught Economics using lecture method.

**Research Question Three:** What is the influence of gender on mean achievement scores of students taught Economics using concept mapping?

**Table 5:** Showing the influence of gender on mean achievement scores of students taught Economics using concept mapping.

| Gender | Pre-test  |      | Post-test |      | Mean achievement gain |
|--------|-----------|------|-----------|------|-----------------------|
|        | $\bar{X}$ | SD   | $\bar{X}$ | SD   |                       |
| Male   | 15.81     | 5.47 | 23.54     | 4.04 | 7.73                  |
| Female | 15.79     | 5.45 | 23.51     | 4.03 | 7.72                  |

The result in table 5 shows that the pre-test achievement mean score of male students taught Economics using concept mapping is 15.81 with a standard deviation of 5.47 while that of

female students taught Economics using concept mapping is 15.79 with a standard deviation of 5.45. The result further shows that the post-test achievement mean score of male students taught Economics using concept mapping is 23.54 with a standard deviation of 4.04 while that of female students taught Economics using concept mapping is 23.51 with a standard deviation of 4.03. The result indicates that the mean achievement gain of male students taught Economics using concept mapping is 7.73 while that of female students taught Economics using concept mapping is 7.72

**H0<sub>3</sub>:** There is no significant difference in the influence of gender on mean achievement scores of students taught Economics using concept mapping.

**Table 6:** ANCOVA analysis of significant difference in the influence of gender on mean achievement scores of students taught Economics using concept mapping.

| Source of variation | Sum of square | df  | Mean square | F cal    | F tab |
|---------------------|---------------|-----|-------------|----------|-------|
| Covariates          | -111.2        | -   | -111.2      | -12.2212 |       |
| Explained (R)       | 31.6180       | 2   | 15.4531     | 1.4413   | 1.972 |
| Residual (E)        | 281.4312      | 268 | 7.1351      |          |       |
| Total               | 313.0592      | 268 | 7.0411      |          |       |

The result in table 6 shows that f-cal is 1.4413 while the f-tab is 1.972. Since the f-cal of 1.4413 is less than the f-tab value of 1.972, the null hypothesis one is therefore accepted. This indicates that gender has no significant difference in mean achievement scores of students taught Economics using concept mapping.

**Research Question Four:** What is the influence of gender on mean interest scores of students taught Economics using concept mapping?

**Table 7:** Showing the influence of gender on mean interest scores of students taught Economics using concept mapping.

| Gender | Pre-test  |      | Post-test |      | Mean interest gain |
|--------|-----------|------|-----------|------|--------------------|
|        | $\bar{X}$ | SD   | $\bar{X}$ | SD   |                    |
| Male   | 14.81     | 4.33 | 22.97     | 3.11 | 8.16               |
| Female | 14.82     | 4.33 | 23.10     | 3.12 | 8.28               |

The result in table 7 shows that the pre-test interest mean score of male students taught Economics using concept mapping is 14.81 with a standard deviation of 4.33 while that of female students taught Economics using concept mapping is 14.82 with a standard deviation of 4.33. The result further shows that the post-test interest mean score of male students taught Economics using concept mapping is 22.97 with a standard deviation of 3.11 while that of female students taught Economics using concept mapping is 23.10 with a standard deviation of 3.12. The result indicates that the mean interest gain of male students taught Economics using concept mapping is 8.16 while that of female students taught Economics using concept mapping is 8.28

**H04:** There is no significant difference in the influence of gender on mean interest scores of students taught Economics using concept mapping.

**Table 8:** ANCOVA analysis of significant difference in the influence of gender on mean interest scores of students taught Economics using concept mapping.

| Source of variation | Sum of square | df  | Mean square | F cal    | F tab |
|---------------------|---------------|-----|-------------|----------|-------|
| Covariates          | -110.9        | -   | -110.9      | -12.5504 |       |
| Explained (R)       | 32.7033       | 2   | 17.85105    | 1.1088   | 1.021 |
| Residual (E)        | 271.4119      | 268 | 8.2209      |          |       |
| Total               | 304.1442      | 268 | 8.6933      |          |       |

The result in table 8 shows that f-cal is 1.1088 while the f-tab is 1.021. Since the f-cal of 1.1088 is less than the f-tab value of 1.021, the null hypothesis one is therefore rejected. This indicates that gender has no significant difference in mean interest scores of students taught Economics using concept mapping.

**Research Question Five:** What is the influence of location on mean achievement scores of students taught Economics using concept mapping?

**Table 9:** Showing the influence of location on mean achievement scores of students taught Economics using concept mapping.

| Location | Pre-test  |      | Post-test |      | Mean achievement gain |
|----------|-----------|------|-----------|------|-----------------------|
|          | $\bar{X}$ | SD   | $\bar{X}$ | SD   |                       |
| Urban    | 15.72     | 5.25 | 26.17     | 4.15 | 10.45                 |
| Rural    | 13.11     | 4.15 | 20.10     | 3.12 | 6.99                  |

The result in table 9 shows that the pre-test mean achievement score of urban students taught Economics using concept mapping is 15.72 with a standard deviation of 5.25 while that of rural students taught Economics using concept mapping is 13.11 with a standard deviation of 4.15. The result further shows that the post-test mean achievement score of students taught Economics using concept mapping is 26.17 with a standard deviation of 4.15 while that of rural students taught Economics using concept mapping is 20.10 with a standard deviation of 3.12. The result indicates that the mean achievement gain of urban students taught Economics using concept mapping is 10.45 while that of rural students taught Economics using concept mapping is 6.99

**H0<sub>5</sub>:** There is no significant difference in the influence of location on mean achievement scores of students taught Economics using concept mapping.

**Table 10:** ANCOVA analysis of significant difference in the influence of location on mean achievement scores of students taught Economics using concept mapping.

| Source of variation | Sum of square | df  | Mean square | F cal    | F tab |
|---------------------|---------------|-----|-------------|----------|-------|
| Covariates          | -118.6        | -   | -118.6      | -19.5504 |       |
| Explained (R)       | 43.1133       | 2   | 17.22311    | 2.9721   | 2.122 |
| Residual (E)        | 284.2521      | 268 | 7.5512      |          |       |
| Total               | 301.3654      | 268 | 7.7623      |          |       |

The result in table 10 shows that  $f_{\text{cal}}$  is 2.9721 while the  $f_{\text{tab}}$  is 2.122. Since the  $f_{\text{cal}}$  of 2.9721 is more than the  $f_{\text{tab}}$  value of 2.122, the null hypothesis one is therefore rejected. This indicates that location has significant difference in mean achievement scores of students taught Economics using concept mapping.

**Research Question Six:** What is the influence of location on mean interest scores of students taught Economics using concept mapping?

**Table 11:** Showing the influence of location on mean interest scores of students taught Economics using concept mapping.

| Location | Pre-test  |      | Post-test |      | Mean achievement gain |
|----------|-----------|------|-----------|------|-----------------------|
|          | $\bar{X}$ | SD   | $\bar{X}$ | SD   |                       |
| Urban    | 13.67     | 4.22 | 26.55     | 5.23 | 12.88                 |
| Rural    | 11.22     | 3.23 | 19.12     | 3.41 | 7.90                  |

The result in table 11 shows that the pre-test mean interest score of urban students taught Economics using concept mapping is 13.67 with a standard deviation of 4.22 while that of rural students taught Economics using concept mapping is 11.22 with a standard deviation of 3.23. The result further shows that the post-test mean interest score of urban students taught Economics using concept mapping is 26.55 with a standard deviation of 5.23 while that of rural students taught Economics using concept mapping is 19.12 with a standard deviation of 3.41. The result indicates that the mean interest gain of students taught Economics using concept mapping is 12.88 while that of rural students taught Economics using concept mapping is 7.90.

**H0<sub>6</sub>:** There is no significant difference in the influence of location on mean interest scores of students taught Economics using concept mapping.

**Table 12:** ANCOVA analysis of significant difference in the influence of location on mean interest scores of students taught Economics using concept mapping.

| Source of variation | Sum of square | df  | Mean square | F cal    | F tab |
|---------------------|---------------|-----|-------------|----------|-------|
| Covariates          | -112.2        | -   | -112.2      | -15.4411 |       |
| Explained (R)       | 32.3266       | 2   | 14.71216    | 2.8411   | 2.121 |
| Residual (E)        | 282.1234      | 268 | 5.2312      |          |       |
| Total               | 314.4500      | 268 | 6.1021      |          |       |

The result in table 12 shows that f-cal is 2.8411 while the f-tab is 2.121. Since the f-cal of 2.8411 is more than the f-tab value of 2.121, the null hypothesis one is therefore rejected. This indicates that location has significant difference in mean interest scores of students taught Economics using concept mapping.

### Summary of the Findings

The following are the summary of the findings.

- 1) That there is a significant difference in mean achievement scores of students taught Economics using concept mapping and those taught Economics using lecture method.
- 2) That there is a significant difference in mean interest scores of students taught Economics using concept mapping and those taught Economics using lecture method.
- 3) That gender has no influence on mean achievement scores of students taught Economics using concept mapping.
- 4) That gender has no influence on mean interest scores of students taught Economics using concept mapping.
- 5) That location has influence on mean achievement scores of students taught Economics using concept mapping.
- 6) That location has influence on mean interest scores of students taught Economics using concept mapping.

## **CHAPTER FIVE**

### **DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS**

This chapter presents the discussion of the findings, conclusion, educational implications of the study, recommendation, limitation, suggestion for further studies, and summary of the study.

#### **Discussion of the Findings**

The findings of the study are discussed in line with the research questions and hypotheses that guided the study. The finding of the study with respect to research question one shows that there is a significant difference in mean achievement scores of students taught Economics using concept mapping and those taught Economics using lecture method. This finding agrees with the earlier findings of Eke (2004) and Yearwood (2005) who found out that concept mapping instructional strategy has significant positive influence on students' academic performance. Furthermore, Zollman & Robert (2008) as well as Abdullahi (2010) also found out in their respective studies that the use of innovative teaching strategy such as concept mapping enhances students' academic achievement. The reason for enhancement of students' academic performance as a result of the use of innovative teaching strategies such as concept mapping could be as a result of the fact that concept mapping instructional method explains concepts better using mapping strategy such that the students easily understand the relationships between and among concepts. This strategy gives students opportunity to participate actively in the sense that the students can be map out concepts from the topic presented to them by their teacher.

The finding of the study with respect to research question two shows that there is a significant difference in mean interest scores of students taught Economics using concept

mapping and those taught Economics using lecture method. This finding supports the earlier finding of Oghene (2007) who found out that concept mapping instructional strategy help to sustain students' interest. Ibuzu (2007) also found out that innovative teaching method such as concept mapping enhances students' interest in learning. Furthermore, the present finding is in line with the findings of John (2007) who found out that concept mapping instructional strategy improve students' interest in learning. This findings show that when students are given opportunity to participate actively in teaching and learning process, their interest in learning activities increases. The reason for the constant findings which shows that the use of concept mapping enhances students' interest in learning including interest in Economics could be as a result of the fact that concept mapping instructional method explains concepts better using mapping strategy such that the students easily understand the relationships between and among concepts.

The finding of the study with respect to research question three shows that there is no significant difference in the influence of gender on mean achievement scores of students when taught Economics using concept mapping. This finding supports the earlier findings of Madu (2004) and Okebukola (2005) who found out that gender has no significant influence on students' academic achievement when taught using innovative strategy like concept mapping. Ezeudu (2005) in a study also found out that being a male or female does not influence students' academic achievement when taught using the same teaching method. However, the present finding contradicts with the earlier findings of Ezeugwu (2007) and Gilbert (2009) who found out that gender has significant influence on students' academic achievement when taught using the same innovative teaching strategy. The reason for the difference in the findings could be

attributed to the fact that Ezeugwu and Gilbert carried out their respective studies using science subjects which obviously could attract disparity gender performance in the subjects.

The finding of the study with respect to research question four shows that there is no significant difference in the influence of gender on mean interest scores of students when taught Economics using concept mapping. This finding agrees with the earlier finding of Eze (2010) and Nwagbo (2013) who found out that gender has no significant influence on students' interest in learning when taught using the same teaching method. However, the present finding contradicts the earlier findings of Ekwe (2013) who found out in a study that gender has significant influence on students' academic interest when taught using the same teaching method. The reason for the difference in the findings could be attributed to the fact that Ezeugwu and Gilbert carried out their respective studies using science subjects which obviously could attract disparity in gender interest in the subjects.

The finding of the study with respect to research question five shows that there is a significant difference in the influence of location on mean achievement scores of students when taught Economics using concept mapping. This finding supports the earlier findings of Adebisi (2008) and Chukwu (2009) who found out that location has significant influence on students' academic achievement when taught using the same teaching method. However, the present finding contradicts the earlier findings of Onuwa (2004) and Kalu (2004) who found out in study that location has no significant influence on students' academic achievement when taught using the same teaching method. The reason given by Onuwa and Kalu for their respective findings is that both urban and rural schools used the same curriculum and so could not have recorded significant different in their academic achievement.

The finding of the study with respect to research question six shows that there is a significant difference in the influence of location on mean interest scores of students when taught Economics using concept mapping. This finding is in line with the earlier findings of Chukwu (2009) and Adeji (2011) who found out that school location of students has significance influence on their interest in learning when taught using the same teaching method. However, the present finding contradicts the earlier findings of Onuwa (2004) and Nze (2006) who found out in a study that school location of students has no significant influence on students' academic interest when taught using the same teaching method. The reason given by Onuwa and Nze for their respective findings is that both urban and rural schools students are taught with the same recommended teaching methods and so could not have recorded significant different in their interest in the school subjects.

### **Conclusion of the Study**

Based on the findings of the study, the following conclusions were drawn.

- 1) The study concludes that there is a significant difference in mean achievement scores of students taught Economics using concept mapping and those taught Economics using lecture method.
- 2) The study also concludes that there is a significant difference in mean interest scores of students taught Economics using concept mapping and those taught Economics using lecture method.
- 3) The study further concludes that there is no significant difference in the influence of gender on mean achievement scores of students when taught Economics using concept mapping.

- 4) The study as well concludes that there is no significant difference in the influence of gender on mean interest scores of students when taught Economics using concept mapping.
- 5) The study equally concludes that there is a significant difference in the influence of location on mean achievement scores of students when taught Economics using concept mapping.
- 6) The study again concludes that there is a significant difference in the influence of location on mean interest scores of students when taught Economics using concept mapping.

### **Educational Implications of the Study**

The findings of the study have some educational implications. First, the study found out that there is a significant difference in the mean achievement and interest score of students taught Economics using concept mapping strategy and those taught Economics using lecture method. This implies that those taught Economics using concept mapping strategy achieved better. The implication of this finding is that if innovative teaching methods like concept mapping which is student centred are not used by teachers in teaching social studies, the students learning of Economics will not be enhanced and many Economics concepts will not be understood.

Secondly, the study found out that the school location of students has significant influence on their achievement and interest in Economics when taught using concept mapping strategy. The implication of the finding is that if educational infrastructure is not provided adequately in the rural schools as it is obtainable in urban schools, the rural school students will continue to perform low in Economics even if they are taught Economics using concept mapping.

### **Recommendation of the Study**

Based on the findings of the study, the following recommendations were made;

- 1) The study recommends that Economics teachers should adopt concept mapping strategy in teaching Economics curriculum concepts.
- 2) The study also recommends that quality education in terms of infrastructure should be provided in rural areas as it is in urban areas.
- 3) Government should organize workshop for serving Economics teachers to enable them learn how to develop and use concept mapping in teaching social studies.

### **Limitation of the Study**

The study encountered some limitations. First the researcher restricted the study to only Awka Education Zone of Anambra State and this limits the generalization of the findings to the entire state. Secondly, it was not easy for the researcher to reach the rural schools and also their attitude and cooperation at first posed a problem.

### **Suggestion for Further Studies**

The following areas are suggested for further studies.

- 1) The present study should be carried out in other education zones where students' achievement and interest in Economics is low.
- 2) Assessment of teachers' knowledge and preparedness in using concept mapping in Economics classroom.
- 3) Effect of concept mapping on students' retention in Economics.

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## Appendix A

**Table of Specification for Economics Achievement Test (EAT)**

| Topic                                                                             | Knl 8% | Comp 16% | App 22% | Anl 20% | Syn 18% | Eva 16% | Total 100% |
|-----------------------------------------------------------------------------------|--------|----------|---------|---------|---------|---------|------------|
| Meaning of Money/Inflation/Deflation. 14%                                         | 2      | 1        | 1       | 1       | 1       | 1       | 7          |
| Functions/characteristics of money. 10%                                           | 2      | 1        | 1       | 1       | 0       | 0       | 5          |
| Causes of Inflation/Deflation. 20%                                                | 4      | 2        | 2       | 2       | 0       | 0       | 10         |
| Effect of Inflation/Deflation. 18%                                                | 4      | 2        | 2       | 1       | 0       | 0       | 9          |
| Control of Inflation/Deflation. 30%                                               | 6      | 2        | 2       | 2       | 2       | 1       | 15         |
| Reasons why price control system may not be suitable in demand pull inflation. 8% | 1      | 1        | 1       | 1       | 0       | 0       | 4          |
| Total. 100%                                                                       | 19     | 9        | 9       | 8       | 3       | 2       | 50         |

## Appendix B

### Economics Achievement Test (EAT).

**Class: SS2**

**Time: 1 hour 45minutes**

**Instruction: Choose the correct answer from the options A-D**

1. Money can be defined as a (a) medium of exchange (b) medium of engagement (c) homogeneity money (d) scarcity of money
2. A constant decline in price is referred to as (a) deflation (b) stagflation (c) inflation (d) none of the above
3. Deflation is (a) rise in price (b) fall in price (c) Over production (d) low production
4. \_\_\_\_ inflation is when demand is greater than supply. (a) cost-pull (b) hyper (c) demand-pull (d) creepy inflation
5. When inflation involves a slow but steadily rise in the general price of goods and services it is known as \_\_\_\_\_ inflation. (a) cost-pull (b) demand-pull (c) hyper (d)creeping
6. Cost- pull inflation has to do with (a) over demand (b) cost of production (c) cost of labour only. (d) cost of material only
7. Hyper inflation is also (a) run-away (b)persistent (c) cost-push (d) none of the above
8. More money chasing few goods can be referred to as (a) staflaton (b) disflation (c) inflation (d) deflation.
9. \_\_\_\_\_ is one of the qualities of good money (a) durability (b) paper money (c)deposit money (d) credit
10. Portability is one of the (a) functions of money (b) characteristics of money (c) means of getting money (d) divisibility of money
11. All are the qualities of good money except (a) durability (b) divisibility (c) credit money (d) portability
12. One of these is not a function of money (a) store of value (b) deferred payment (c) measurement of value (d) partial money
13. As prices fall, the value of money (a) falls during deflation (b) rises during inflation (c) remain constant (d) none of the above

14. Low production of goods and services can also lead to (a) deflation (b) disinflation (c) inflation (d) stagflation
15. ----- cannot cause inflation ( a) war (b) increase in demand (c) inflation (d) stagflation
16. ----All cause inflation except (a) increase in population (b) low productivity (c) increase in salaries and wages (d) increase in production
17. Increase in taxation can cause (a) inflation (b) deflation (c) a and b (d) none of the above
18. All cause deflation except (a) budget surplus (b) increased bank rate (c) increase in production (d) none of the above
19. Excessive bank lending could lead to (a) deflation (b) Reflation (c) inflation (d) disinflation
20. When the demand for goods and services is greater than supply it leads to (a) deflation (b) inflation (c) stagnation (d) high demand
21. If banks lend more money it (a) favours inflation (b) causes inflation (c) eliminates inflation (d) none of the above
22. Poor storage facilities causes (a) deflation (b) stagflation (c) inflation (d) reflation
23. Positively inflation can lead to (a) higher output (b) less output (c) more borrowing (d) more lending
24. Because producers are selling their goods at higher prices inflation can to (a) too much (b) more profit margin(c) reduction in debt burden (d) none of the above
25. Negatively inflation discourages (a) saving (b) investment (C) taxation (d) employment
26. Inflation leads to all except (a) fall in value of money (b) fall in standard of living (c) discouraged exports (d) encouraged import
27. Inflation has these effects except (a) balance of payment problem (b) creditors loss (c) increase in interest rate (d) industrialization
28. During ----- debtors gain (a) inflation (b) deflation (c) disflation (d) none above
29. Inflation affects economy through (a) discouraged export (b) balance of surplus (c) rise in standard of living (d) all of the above
30. During inflation government makes more money through (a) more tax (b) subsidy (c) tax holiday (d) innovation
31. -----cannot control inflation (a) use of fiscal measure (b) increased production (c) higher profit margin(d) use of income policies

32. Contractionary monetary is used to curb (a) deflation (b) over population (c) under population (d) inflation
33. Effective price control system can solve the problem of (a) more production (b) less production (c) disinflation (d) inflation
34. Surplus budget is used to (a) solve (b) worsen inflation (c) maintain inflation (d) none of the above
35. All controls inflation except (a) industrialization (b) increase production (c) reduction in burden of debt (d) income policies
36. To control inflation government should (a) discourage importation (b) encourage importation (c) reduce production (d) none of the above
37. Reduction in taxation can reduce (a) inflation (b) deflation (c) under production (d) all of the above
38. ----- is an increase in government expenditure (a) deficit budget (b) surplus budget (c) reduction in tax (d) deflation
39. Increasing wages and salaries can (a) worsen deflation (b) control deflation (c) control inflation (d) worsen inflation
40. Granting subsidy to enterprises can (a) reduce inflation (b) increase inflation (c) reduce deflation (d) worsen deflation
41. If activities of hoarders are not checked (a) deflation will be high (b) inflation will be reduced (c) stagflation will be high (d) all of the above
42. For government to solve inflationary problem she should (a) reduced expenditure (b) increase expenditure (c) increase general price level (d) lend more money
43. Use of fiscal measures (a) reduces inflation (B) reduce reflation (c) reduces deflation (d) none of the above
44. Reduction in taxation reduces (a) inflation (b) deflation (c) budget deficit (d) budget surplus
45. Government buys securities from commercial bank to (a) curb deflation (b) curb inflation (c) increase inflation (d) increase deflation
46. A set of measures by which inflation pressure in economy is removed so as to maintain the value of money Is (a) disinflation (b) reflation (c) inflationary gap (d) none of the above

47. Goods are generally in short supply so price control system cannot (a) solve hyperinflation (b) creeping inflation (c) demand pull inflation (d) galloping inflation
48. In demand pull inflation buyers prefer to buy (a) higher price rather than go empty handed (b) lower price and still go home (c) will not buy at all (d) buy at the cheapest price level
49. One of the reasons why price control system may not work in demand pull inflation is (a) interaction of the forces of demand and supply will work against price control system (b) because of the use of fiscal measure (c) because of discouragement of income (d) removal of bottlenecks in distributive system
50. Existence black market can affect price control system under (a) demand pull inflation (b) galloping inflation (c) creeping inflation (d) cost pull inflation

**Appendix C**

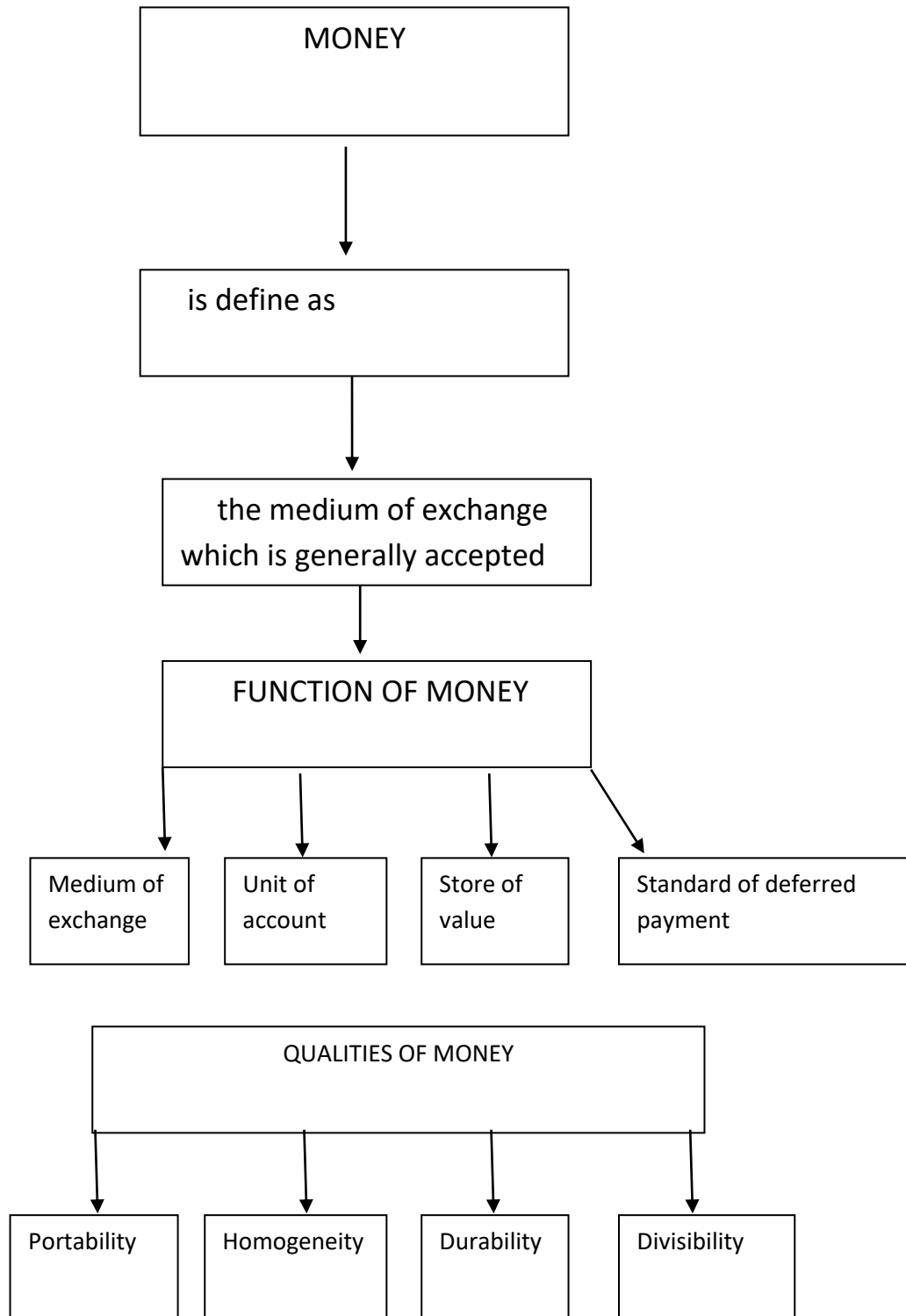
Correct Options to Economics Achievement Test (EAT).

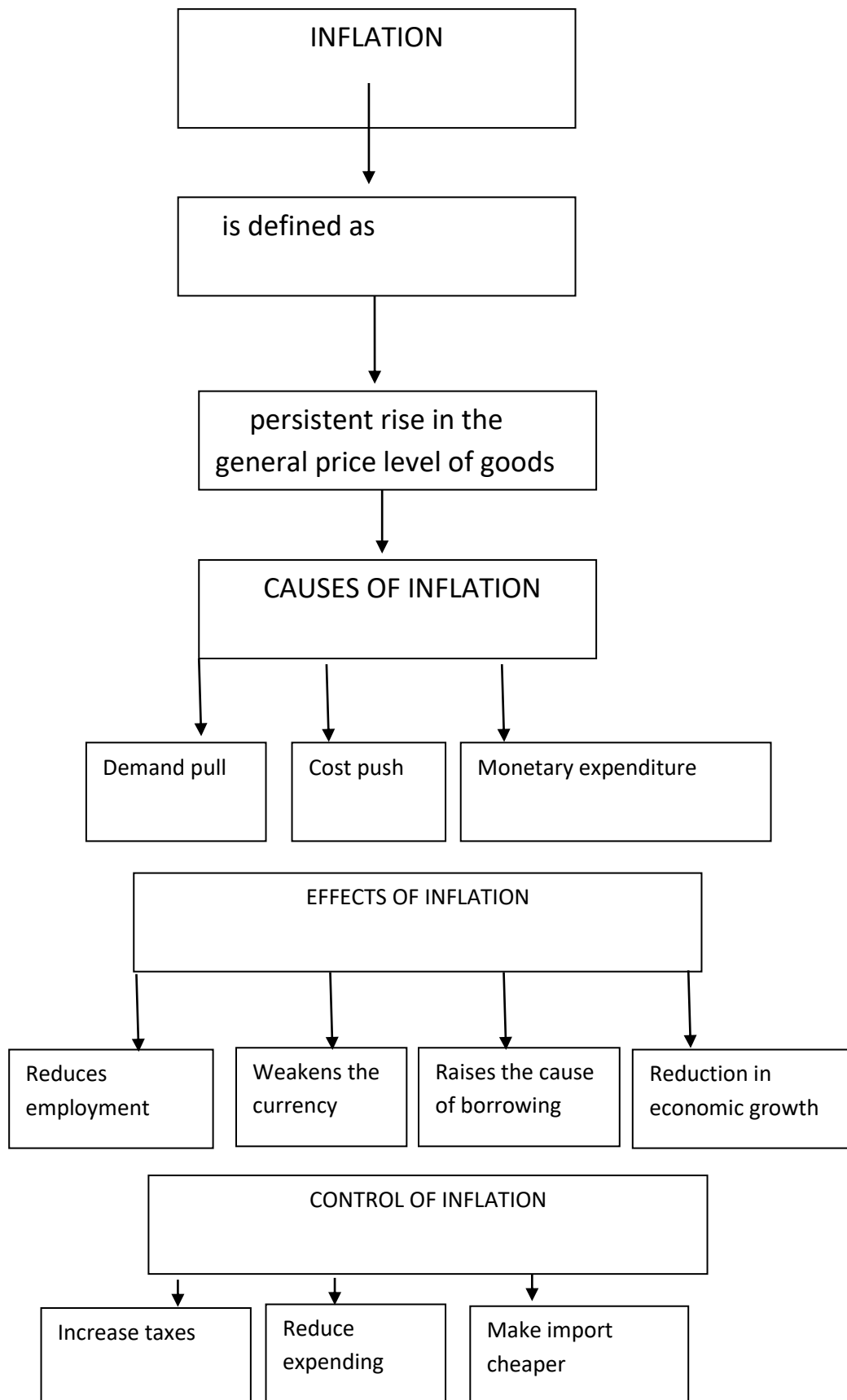
|     |     |     |     |
|-----|-----|-----|-----|
| 1 A | 17C | 33B | 49A |
| 2B  | 18A | 34D | 50A |
| 3C  | 19B | 35A |     |
| 4D  | 20A | 36B |     |
| 5B  | 21D | 37A |     |
| 6A  | 22D | 38A |     |
| 7C  | 23A | 39B |     |
| 8B  | 24A | 40A |     |
| 9C  | 25A | 41B |     |
| 10C | 26C | 42A |     |
| 11D | 27D | 43A |     |
| 12B | 28D | 44C |     |
| 13A | 29A | 45A |     |
| 14A | 30C | 46A |     |
| 15B | 31D | 47C |     |
| 16B | 32A | 48A |     |

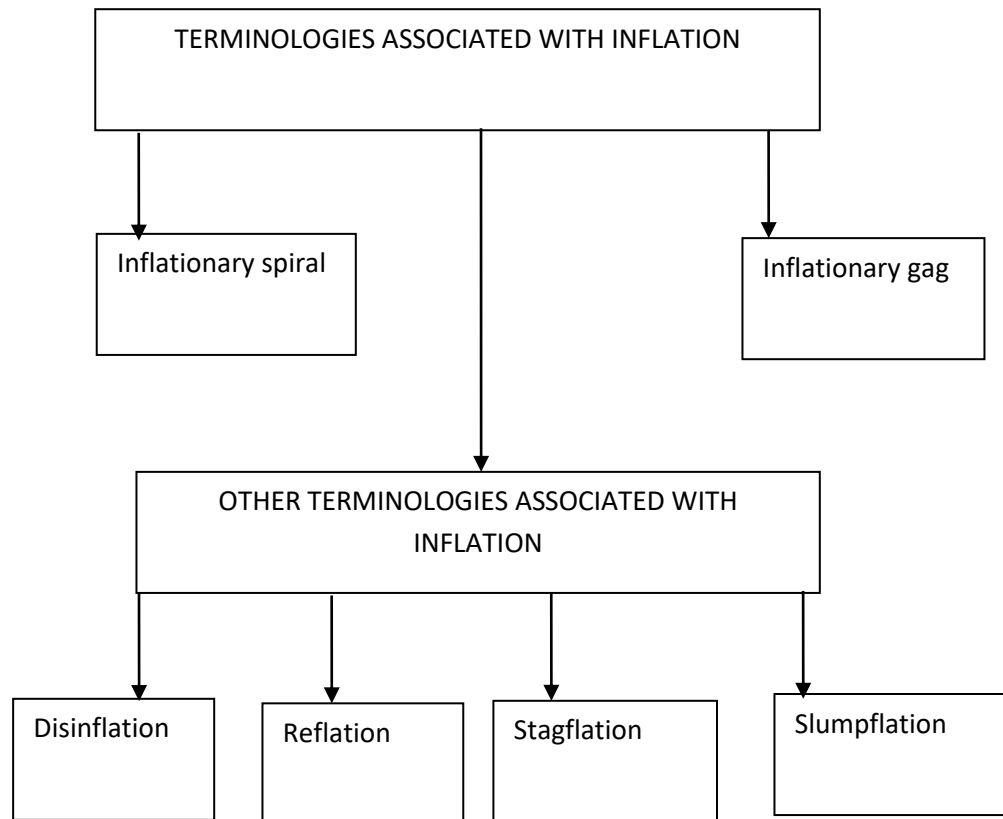
## Appendix D

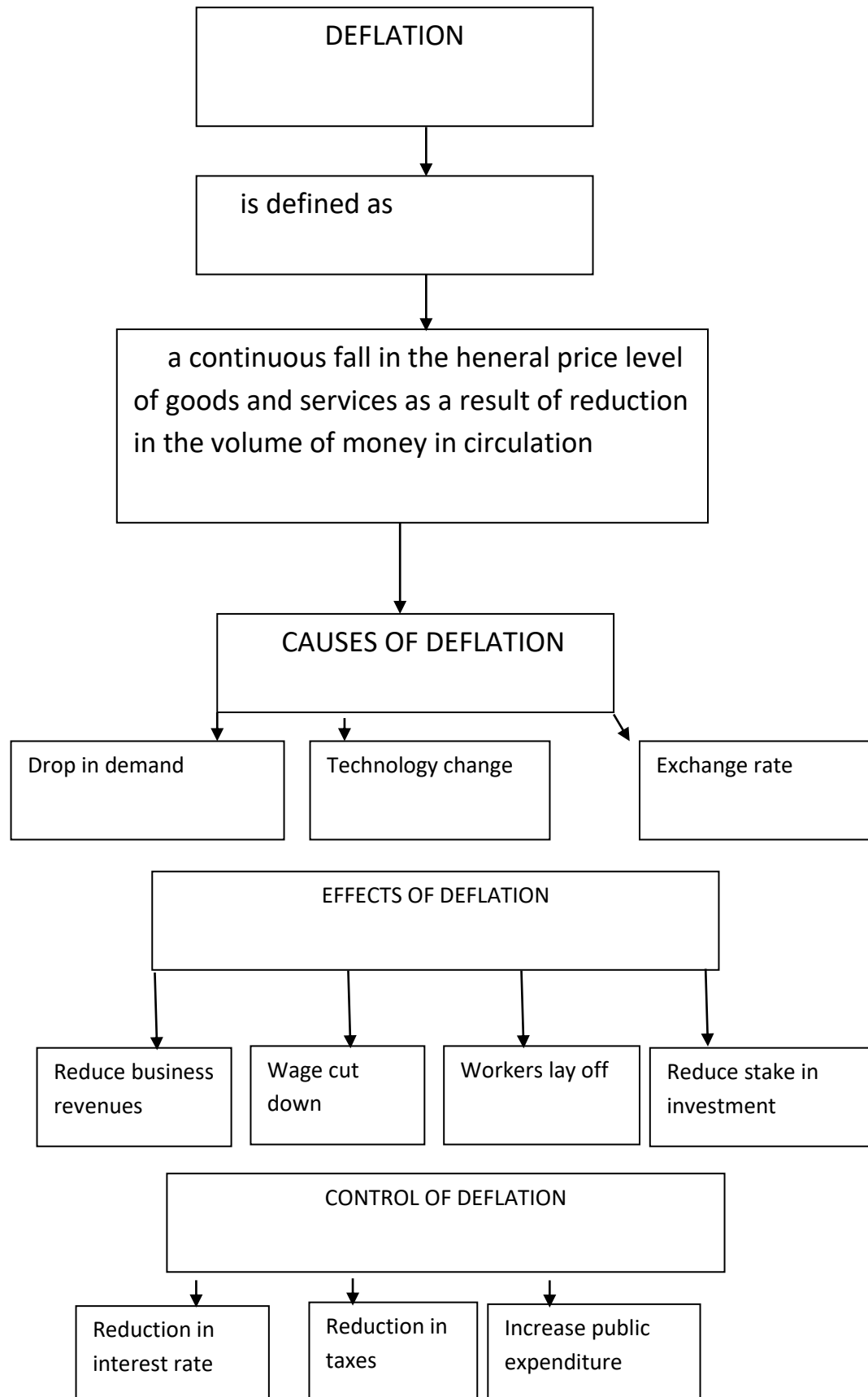
### CONCEPT MAPPING OF THE TOPICS FOR EXPERIMENTAL GROUP

#### CONCEPT MAPPING FOR LESSON ONE



**CONCEPT MAPPING FOR LESSON TWO**

**CONCEPT MAPPING FOR LESSON THREE**

**CONCEPT MAPPING FOR LESSON FOUR**

## Appendix F

### Lesson Plan for Experimental Group

#### Lesson Plan for Period 1

**Subject:** Economics

**Topic:** Definition, Functions and Qualities of good money.

**Class:** SS2

**Duration:** 40minutes.

**Average Age:** 18yrs.

**Instructional Objective:** By the end of the lesson, the students should be able to:

- i. Define money.
- ii. Mention the functions of money.
- iii. Explain the various qualities of good money.
- iv. Draw different denominations of money.

**Entry behaviour:** The students have learnt about trade by barter.

**Instructional Materials:** Concept mapping.

#### Instructional Procedures

| Content Development.<br>(CD)                       | Teacher's Performance Activities.                                                                                                                                                                                      | Students' performance Activities.                                          | Teaching Strategy/technique. |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------|
| Step I:<br>Administration of entry behaviour test. | The teacher administers entry behaviour test so as to ascertain their previous knowledge on the topic to be discussed. Based on the outcome of the entry test, the teacher introduced the topic using concept mapping. | The students participate in the entry behaviour test given by the teacher. | Test of entry behavior       |
| Step II:<br>introduction                           | The teacher presented the definition of money using concept mapping. Money was                                                                                                                                         | The students pay attention as they ask questions where they are confused.  | Use of concept mapping.      |

|                                      |                                                                                                                                                                                                                                        |                                                                                                                                                                        |                         |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| /definition of money                 | defined as the medium of exchange which is generally accepted in payment for goods, services and debt without any particular consideration of the position of the person giving the money in payment.                                  |                                                                                                                                                                        |                         |
| Step III:<br>Functions of money.     | The teacher used concept mapping and presented functions of money to the students.                                                                                                                                                     | The students jot down points and ask questions.                                                                                                                        | Use of concept mapping. |
| Step IV.<br>Qualities of good money. | The teacher used concept mapping and presented qualities of good money to the students.                                                                                                                                                | The students jot down points and ask questions.                                                                                                                        | Use of concept mapping. |
| Step V<br>Summary.                   | The teacher summarized the topic.                                                                                                                                                                                                      | The students actively participate in the topic summary.                                                                                                                | Planned repetition.     |
| Step VI.                             | The teacher now evaluates the students by asking the following questions: 1. What is money? 2. What are the functions of money? 3. Mention 4 qualities of good money, after which the teacher's note is given to the students to copy. | The students indicate interest to answer the questions by raising their hands as they give answers to the various questions and copy the note as given by the teacher. | Use of questions.       |

## Lesson Plan for Period 2

**Subject:** Economics

**Topic:** Inflation.

**Class:** SS2

**Duration:** 40 Minutes.

**Average Age:** 18 years

**Instructional Objective:** By the end of the lesson the student should be able to:

- i. Define inflation
- ii. Mention types of inflation
- iii. Mention the causes inflation
- iv. Mention the effects of inflation

**Entry behaviour:** The students have learnt about money. And they have noticed the prices of goods and services increasing and falling.

**Instructional Materials:** Concept mapping.

### Instruction Procedure

| Content Development.<br>(CD)                       | Teacher's Performance Activities.                                                                                                                                                               | Students' performance Activities.                                          | Teaching Strategy/technique. |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------|
| Step I.<br>Administration of entry behaviour test. | The teacher administers entry behaviour test so as to ascertain their previous knowledge on the topic to be discussed. Based on the outcome of the entry test, the teacher introduced the topic | The students participate in the entry behaviour test given by the teacher. | Test of entry behavior       |

|                                            |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                        |                         |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
|                                            | using concept mapping.                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                        |                         |
| Step II: introduction of Inflation.        | The teacher narrates to the students how cheap the prices of goods and services were when he was in secondary school compared with the present prices now. After which he introduces the topic of the day through the use of concept mapping as inflation. Through the use of concept mapping inflation was defined as persistent rise in the general price level of goods and services. | The students pay attention as they ask questions where they are confused.                                                                                              | Use of concept mapping. |
| Step III: causes and effects of inflation. | With use of concept mapping, the teacher presented the causes and effects of inflation to the students.                                                                                                                                                                                                                                                                                  | The students jot down points and ask questions.                                                                                                                        | Use of concept mapping. |
| Step IV. Control of inflation.             | With use of concept mapping, the teacher presented the control of inflation to the students.                                                                                                                                                                                                                                                                                             | The students jot down points and ask questions.                                                                                                                        | Use of concept mapping. |
| Step V. Summary.                           | The teacher summarized the topic with the students.                                                                                                                                                                                                                                                                                                                                      | The students actively participate in the summarization of topic.                                                                                                       | Planned repetition.     |
| Step V. Evaluation                         | The teacher now evaluates the students by asking the following questions: 1. What is inflation? 2. Mention 3 causes of inflation. 3. State 2 effects of inflation. 4. State 2 ways in which inflation can be controlled.                                                                                                                                                                 | The students indicate interest to answer the questions by raising their hands as they give answers to the various questions and copy the note as given by the teacher. | Use of questions.       |

### Lesson Plan for Period 3

**Subject:** Economics.

**Topic:** Inflation.

**Sub-topic:** Terminologies Associated with Inflation.

**Class:** SS2

**Duration:** 40 Minutes.

**Average Age:** 18 years

**Instructional Objective:** By the end of the lesson the student should be able to:

- i. Define inflationary gap.
- ii. Explain inflationary spiral.
- iii. Define disinflation.
- iv. Differentiate between reflation and stagflation.

**Entry Behaviour:** The students have learnt inflation and various types of inflation.

**Instructional Materials:** Concept mapping.

### Instructional Procedures

| Content Development.<br>(CD)                       | Teacher's Performance Activities.                                                                                                                                                                                      | Students' performance Activities.                                          | Teaching Strategy/technique. |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------|
| Step I.<br>Administration of entry behaviour test. | The teacher administers entry behaviour test so as to ascertain their previous knowledge on the topic to be discussed. Based on the outcome of the entry test, the teacher introduced the topic using concept mapping. | The students participate in the entry behaviour test given by the teacher. | Test of entry behavior       |

|                                                          |                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                        |                         |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Step II:<br>Terminologies associated with inflation.     | With the use of concept mapping, the teacher briefly explains the various terminologies associated with inflation which includes: inflationary gap, inflationary spiral.                                                                                                                                            | The students pay attention as they ask questions where they are confused.                                                                                              | Use of concept mapping. |
| Step III: Other terminologies associated with inflation. | With the use of concept mapping, the teacher briefly explains other various terminologies associated with inflation which includes: disinflation, reflation, stagflation and slumpflation.                                                                                                                          | The students jot down points and ask questions.                                                                                                                        | Use of concept mapping. |
| Step V.<br>Summary.                                      | With the use of concept mapping, the teacher summarized the topic with the students.                                                                                                                                                                                                                                | The students actively participate in the summarization of the topic.                                                                                                   | Planned repetition.     |
| Step V.<br>Evaluation                                    | The teacher now evaluates the students by asking the following questions: 1. What is inflationary gap? 2. Define inflationary spiral? 3. What is the difference between disinflation and reflation? 4. Explain stagflation and slumpflation.<br><br>After which the teacher's note is given to the students to copy | The students indicate interest to answer the questions by raising their hands as they give answers to the various questions and copy the note as given by the teacher. | Use of questions.       |

## Lesson Plan for Week 4

**Subject:** Economics

**Topic:** Deflation.

**Class:** SS2

**Duration:** 40 Minutes.

**Average Age:** 18 years

**Instructional Objective:** By the end of the lesson the student should be able to:

- i. Define deflation.
- ii. Explain the causes of deflation.
- iii. Explain the ways of controlling of deflation.

**Entry behaviour:** The students have learnt inflation. And they have notice prices of goods and services changing.

**Instructional Material:** Concept mapping.

### Instructional Procedures

| Content Development.<br>(CD)                       | Teacher's Performance Activities.                                                                                                                                                                                      | Students' performance Activities.                                          | Teaching Strategy/technique. |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------|
| Step I.<br>Administration of entry behaviour test. | The teacher administers entry behaviour test so as to ascertain their previous knowledge on the topic to be discussed. Based on the outcome of the entry test, the teacher introduced the topic using concept mapping. | The students participate in the entry behaviour test given by the teacher. | Test of entry behavior       |

|                                                             |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                        |                         |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Step II.<br>Introduction and<br>definition of<br>Deflation. | With the use of concept mapping, the teacher briefly explains to the students how the prices of goods and services at times fall. The teacher then introduces the topic for the day as Deflation and defines it as a continuous fall in the general price level of goods and services as a result of reduction in the volume of money in circulation. | The students pay attention as they ask questions where they are confused.                                                                                              | Use of concept mapping. |
| Step III: causes and effects of deflation.                  | With the use of concept mapping, the teacher presents the causes and effects of deflation.                                                                                                                                                                                                                                                            | The students jot down notes and asked questions.                                                                                                                       | Use of concept mapping. |
| Step IV. Ways of controlling deflation.                     | With the use of concept mapping, the teacher presents ways of controlling deflation.                                                                                                                                                                                                                                                                  | The students jot down notes and asked questions.                                                                                                                       | Use of concept mapping. |
| Step V<br>Summary.                                          | With the use of concept mapping, the teacher summarizes the topic.                                                                                                                                                                                                                                                                                    | The students actively participate in the topic summarization.                                                                                                          | Planned repetition.     |
| Step V.<br>Evaluation                                       | The teacher now evaluates the students by asking the following questions: 1. Define deflation. 2. What are the causes of deflation? 3. What are the effects of deflation? 4. In what ways can deflation be controlled.<br>After which the teacher's note is given to the students to copy                                                             | The students indicate interest to answer the questions by raising their hands as they give answers to the various questions and copy the note as given by the teacher. | Use of questions.       |



## Appendix G

### Lesson Plan for Control Group

#### Lesson Plan for Period 1

**Subject:** Economics

**Topic:** Definition, Functions and Qualities of good money.

**Class:** SS2

**Duration:** 40minutes.

**Average Age:** 18yrs.

**Instructional Objective:** By the end of the lesson, the students should be able to:

- i. Define money.
- ii. Mention the functions of money.
- iii. Explain the various qualities of good money.
- iv. Draw different denominations of money.

**Entry behaviour:** The students have learnt about trade by barter.

**Instructional Materials:** Textbook, chalkboard.

#### Instructional Procedures

| Content Development.<br>(CD)                       | Teacher's Performance Activities.                                                                                                                              | Students' performance Activities.                                          | Teaching Strategy/technique. |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------|
| Step I.<br>Administration of entry behaviour test. | The teacher administers entry behaviour test so as to ascertain their previous knowledge on the topic to be discussed. Based on the outcome of the entry test, | The students participate in the entry behaviour test given by the teacher. | Set induction.               |

|                                                     |                                                                                                                                                                                                                                                                                  |                                                                                                                                                                        |                                  |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                                                     | the teacher introduced the on the blackboard.                                                                                                                                                                                                                                    |                                                                                                                                                                        |                                  |
| Step II:<br>introduction<br>/definition of<br>money | The teacher presented the definition of money on the chalkboard. Money was defined as the medium of exchange which is generally accepted in payment for goods, services and debt without any particular consideration of the position of the person giving the money in payment. | The students pay attention as they ask questions where they are confused.                                                                                              | Use of illustration/explanation. |
| Step III:<br>Functions of<br>money.                 | The teacher presented functions of money to the students on the blackboard.                                                                                                                                                                                                      | The students jot down points and ask questions.                                                                                                                        | Use of illustration/explanation. |
| Step IV.<br>Qualities of<br>good money.             | The teacher presented qualities of good money to the students on the blackboard.                                                                                                                                                                                                 | The students jot down points and ask questions.                                                                                                                        | Use of illustration/explanation. |
| Step V<br>Summary.                                  | The teacher summarized the topic.                                                                                                                                                                                                                                                | The students actively participate in the topic summary.                                                                                                                | Planned repetition.              |
| Step VI.                                            | The teacher now evaluates the students by asking the following questions: 1. What is money? 2. What are the functions of money? 3. Mention 4 qualities of good money, after which the teacher's note is given to the students to copy.                                           | The students indicate interest to answer the questions by raising their hands as they give answers to the various questions and copy the note as given by the teacher. | Use of questions.                |

## Lesson Plan for Period 2

**Subject:** Economics

**Topic:** Inflation.

**Class:** SS2

**Duration:** 40 Minutes.

**Average Age:** 18 years

**Instructional Objective:** By the end of the lesson the student should be able to:

- i. Define inflation
- ii. Mention types of inflation
- iii. Mention the causes inflation
- iv. Mention the effects of inflation

**Entry behaviour:** The students have learnt about money. And they have noticed the prices of goods and services increasing and falling.

**Instructional Materials:** Text Books, chalk board.

### Instruction Procedure

| Content Development.<br>(CD)                       | Teacher's Performance Activities.                                                                                                                                                                                  | Students' performance Activities.                                          | Teaching Strategy/technique. |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------|
| Step I.<br>Administration of entry behaviour test. | The teacher administers entry behaviour test so as to ascertain their previous knowledge on the topic to be discussed. Based on the outcome of the entry test, the teacher introduced the topic on the blackboard. | The students participate in the entry behaviour test given by the teacher. | Test of entry behavior       |

|                                                          |                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                        |                                  |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Step II:<br>introduction<br>/definition of<br>Inflation. | The teacher narrates to the students how cheap the prices of goods and services were when he was in secondary school compared with the present prices now. After which he introduces the topic of the day on the blackboard as inflation. On the blackboard inflation was defined as persistent rise in the general price level of goods and services. | The students pay attention as they ask questions where they are confused.                                                                                              | Use of illustration/explanation. |
| Step III: causes and effects of inflation.               | The teacher presented the causes and effects of inflation to the students on the blackboard.                                                                                                                                                                                                                                                           | The students jot down points and ask questions.                                                                                                                        | Use of illustration/explanation. |
| Step IV. Control of inflation.                           | The teacher presented the control of inflation to the students on the blackboard.                                                                                                                                                                                                                                                                      | The students jot down points and ask questions.                                                                                                                        | Use of illustration/explanation. |
| Step V.<br>Summary.                                      | The teacher summarized the topic with the students.                                                                                                                                                                                                                                                                                                    | The students actively participate in the summarization of topic.                                                                                                       | Planned repetition.              |
| Step V.<br>Evaluation                                    | The teacher now evaluates the students by asking the following questions: 1. What is inflation? 2. Mention 3 causes of inflation. 3. State 2 effects of inflation. 4. State 2 ways in which inflation can be controlled.                                                                                                                               | The students indicate interest to answer the questions by raising their hands as they give answers to the various questions and copy the note as given by the teacher. | Use of questions.                |

### Lesson Plan for Period 3

**Subject:** Economics.

**Topic:** Inflation.

**Sub-topic:** Terminologies Associated with Inflation.

**Class:** SS2

**Duration:** 40 Minutes.

**Average Age:** 18 years

**Instructional Objective:** By the end of the lesson the student should be able to:

- i. Define inflationary gap.
- ii. Explain inflationary spiral.
- iii. Define disinflation.
- iv. Differentiate between reflation and stagflation.

**Entry Behaviour:** The students have learnt inflation and various types of inflation.

**Instructional Materials:** Text Books, Chalkboard.

### Instructional Procedures

| Content Development.<br>(CD)                       | Teacher's Performance Activities.                                                                                                                                                                                  | Students' performance Activities.                                          | Teaching Strategy/technique. |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------|
| Step I.<br>Administration of entry behaviour test. | The teacher administers entry behaviour test so as to ascertain their previous knowledge on the topic to be discussed. Based on the outcome of the entry test, the teacher introduced the topic on the blackboard. | The students participate in the entry behaviour test given by the teacher. | Test of entry behavior       |

|                                                          |                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                        |                                  |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Step II:<br>Terminologies associated with inflation.     | The teacher briefly explains the various terminologies associated with inflation which includes: inflationary gap, inflationary spiral.                                                                                                                                                                             | The students pay attention as they ask questions where they are confused.                                                                                              | Use of illustration/explanation. |
| Step III: Other terminologies associated with inflation. | The teacher briefly explains other various terminologies associated with inflation which includes: disinflation, reflation, stagflation and slumpflation.                                                                                                                                                           | The students jot down points and ask questions.                                                                                                                        | Use of illustration/explanation. |
| Step V.<br>Summary.                                      | The teacher summarized the topic with the students.                                                                                                                                                                                                                                                                 | The students actively participate in the summarization of the topic.                                                                                                   | Planned repetition.              |
| Step V.<br>Evaluation                                    | The teacher now evaluates the students by asking the following questions: 1. What is inflationary gap? 2. Define inflationary spiral? 3. What is the difference between disinflation and reflation? 4. Explain stagflation and slumpflation.<br><br>After which the teacher's note is given to the students to copy | The students indicate interest to answer the questions by raising their hands as they give answers to the various questions and copy the note as given by the teacher. | Use of questions.                |

## Lesson Plan for Week 4

**Subject:** Economics

**Topic:** Deflation.

**Class:** SS2

**Duration:** 40 Minutes.

**Average Age:** 18 years

**Instructional Objective:** By the end of the lesson the student should be able to:

- i. Define deflation.
- ii. Explain the causes of deflation.
- iii. Explain the ways of controlling of deflation.

**Entry behaviour:** The students have learnt inflation. And they have notice prices of goods and services changing.

**Instructional Material:** Textbooks, Chalk board.

### Instructional Procedures

| Content Development.<br>(CD)                       | Teacher's Performance Activities.                                                                                                                                                                                  | Students' performance Activities.                                          | Teaching Strategy/technique. |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------|
| Step I.<br>Administration of entry behaviour test. | The teacher administers entry behaviour test so as to ascertain their previous knowledge on the topic to be discussed. Based on the outcome of the entry test, the teacher introduced the topic on the blackboard. | The students participate in the entry behaviour test given by the teacher. | Test of entry behavior       |
| Step II.                                           | The teacher briefly explains to                                                                                                                                                                                    | The students pay attention                                                 | Use of                       |

|                                            |                                                                                                                                                                                                                                                                                        |                                                                                                                                                                        |                                  |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Introduction and definition of Deflation.  | the students how the prices of goods and services at times fall. The teacher then introduces the topic for the day as Deflation and defines it as a continuous fall in the general price level of goods and services as a result of reduction in the volume of money in circulation.   | as they ask questions where they are confused.                                                                                                                         | illustration/explanation.        |
| Step III: causes and effects of deflation. | The teacher presents the causes and effects of deflation on the blackboard.                                                                                                                                                                                                            | The students jot down notes and asked questions.                                                                                                                       | Use of illustration/explanation. |
| Step IV. Ways of controlling deflation.    | The teacher presents ways of controlling deflation on the blackboard.                                                                                                                                                                                                                  | The students jot down notes and asked questions.                                                                                                                       | Use of illustration/explanation. |
| Step V Summary.                            | The teacher summarizes the topic on the blackboard.                                                                                                                                                                                                                                    | The students actively participate in the topic summarization.                                                                                                          | Planned repetition.              |
| Step V. Evaluation                         | The teacher now evaluates the students by asking the following questions: 1. Define deflation. 2. What are the causes of deflation? 3. What are the effects of deflation? 4. In what ways can deflation be controlled? After which the teacher's note is given to the students to copy | The students indicate interest to answer the questions by raising their hands as they give answers to the various questions and copy the note as given by the teacher. | Use of questions.                |

### Appendix H: Economics Interest Scale (EIS)

Instruction: Please fill in the blank space provided and tick [✓] in the box most suitable to your opinion.

Name of School:.....

Class:.....

School Location: Urban[ ], [ ]

Gender: Male [ ], Female [ ]

**Instruction:** Please tick [✓] in the box that is most appropriate to your opinion; where

SA = Strongly Agree 4

A = Agree 3

D = Disagree 2

SD = Strongly Disagree 1

| S/N |                                                                            | SA | A | D | SD |
|-----|----------------------------------------------------------------------------|----|---|---|----|
| 1   | I like attending Economics class.                                          |    |   |   |    |
| 2   | I encourage my friends to take interest in Economics as a subject.         |    |   |   |    |
| 3   | I find it easy to answer questions in Economics examination.               |    |   |   |    |
| 4   | I use my leisure time to study Economics                                   |    |   |   |    |
| 5   | I like asking others to help me understand difficult topics in Economics.  |    |   |   |    |
| 6   | I so much like answering questions on elasticity of demand.                |    |   |   |    |
| 7   | I prefer more of the calculations in Economics.                            |    |   |   |    |
| 8   | I will like to study Economics in higher level of Education.               |    |   |   |    |
| 9   | I study Economics on my own.                                               |    |   |   |    |
| 10  | I spend some of my pocket money to buy Economics text books.               |    |   |   |    |
| 11  | I like the Economics theories because I apply them on my daily activities. |    |   |   |    |

|    |                                                                                          |  |  |  |  |
|----|------------------------------------------------------------------------------------------|--|--|--|--|
| 12 | I enjoy doing home work on Economics                                                     |  |  |  |  |
| 13 | I can be self employed after studying Economics in senior secondary school.              |  |  |  |  |
| 14 | I cannot answer any question from the calculation aspect of Economics.                   |  |  |  |  |
| 15 | My only interest in studying Economics is to pass my Exams.                              |  |  |  |  |
| 16 | I don't understand Economics graphs.                                                     |  |  |  |  |
| 17 | I am always scared by those complex graphs in short run and long run market equilibrium. |  |  |  |  |
| 18 | I always walk away when Economics is going on.                                           |  |  |  |  |
| 19 | I don't understand difficult topics in Economics.                                        |  |  |  |  |
| 20 | I can understand calculation in Economics only if it is taught by a male teacher.        |  |  |  |  |
| 21 | I can only read Economics if I am forced to do so.                                       |  |  |  |  |
| 22 | I don't understand the theories in Economics.                                            |  |  |  |  |
| 23 | I don't care if I have Economics textbooks or not                                        |  |  |  |  |
| 24 | I feel bored each time I am in Economics class.                                          |  |  |  |  |
| 25 | I find it difficult to understand the abstract nature of Economics.                      |  |  |  |  |

## Appendix I: Reliability of Instrument

### Scale: Reliability

#### Case Processing Summary

|       |         | N  | %     |
|-------|---------|----|-------|
| Cases | Valid   | 20 | 100.0 |
|       | Exclude | 0  | 0     |
|       | d(a)    |    |       |
|       | Total   | 20 | 100.0 |

a Listwise deletion based on all variables in the procedure.

#### Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .874             | 25         |

DATASET ACTIVATE DataSet1.  
DATASET CLOSE DataSet0.