

**Effects of Scaffolding, Guided Inquiry and Lecture Instructional Method on Social Science Education Students Achievement in Imo State University**

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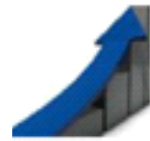
**Abstract**

*The researchers investigate the effects of scaffolding and guided inquiry instructional method on social science education student's achievement in Imo State University. The design of the study is the quasi-experimental research design which adopted the following procedures: pre-test, treatment, treatment and post-test for non-equivalent intact classes. It is a quasi-experimental, non-randomized pre-test, post-test approach. Two research questions and two hypotheses guided the study. The population of the study consists of a total of 1078 students from 100 level to 400 level. The sample consisted of 244 (200 level) students who offered Economics and Social Studies. Purposive and cluster sampling techniques were used to draw the sample for this study. An instrument titled "Economics Achievement Test (EAT) and Social Studies Achievement Test (SSAT). The (EAT) and (SSAT) was used to elicit the academic achievement of students in Economics as a subject both at pre-test, treatment and post-test. The initial draft copies of the instrument were given to five specialists. The instrument was validated by specialist in education measurement and evaluation and social science education with a reliability co-efficient index of 0.87 and 0.88 obtained using Kuder-Richardson 20 statistic (K-R 20). This was considered adequate for the study. Research questions was answered using mean and standard deviation. Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. The findings of the study revealed that students taught economics and social studies using scaffolding and guided inquiry methods achieved significantly more than students taught using lecture method. The study recommended that Curriculum planners such as NERDC should ensure that they are proactive in the incorporation of scaffolding and guided inquiry methods as part of the methods for teaching Economics and Social Studies in higher institutions, since it was found to be effective in enhancing students' achievement.*

**Keywords:** Economics, Social Studies, Scaffolding, Guided Inquiry, Lecture Method, Achievement.

**Introduction**

Economics is a social science that studies human behaviour as regards using his limited/scarce resources to satisfy his unlimited wants. It also studies the forces of demand and

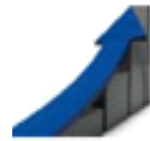


supply as it influences the economy of the individuals and that of the nation at large. Economics is one of the subjects which the secondary school education cannot underestimate the importance or the role it plays in the development and improvement of the nation's economy. Economics as a secondary school subject is expected to help students understand the trends of the nation's economy as well as enable them make their own positive contributions towards nation building. A sound knowledge of Economics is a pre-requisite for entrance into such areas of specializations like sociology, political science, social studies, history and international relations, accounting, marketing, anthropology etc. Economics also deals with the relationship between human behaviour and given ends together with scarce means (Amaechi, 2015).

On the other hand, Social studies is another social science education course. It is the study of man and his physical, social, political, cultural and economic environment. It centers on the development of man, how man influences his environment and how the environment influences him in return. Utulu and Shaibu, (2013) opined that social studies as "a programme of study which society uses to instill in students the knowledge, skills, values, attitude and actions it considers important, concerning the relationships human beings have with each other, their world and themselves". Social studies focused on man and his interactions with his environment. It also keeps on changing because of the factors of time and human development.

The teaching of economics and social studies ought to be a replica of what is happening in the present economy. Therefore, a course of this nature is one that stimulates the curiosity and imagination of student (such as becoming good citizenship and making rational decision in the labour market), thereby encouraging him/her to pursue his own ideas (Shaibu 2020). The curriculum and the classroom practice therefore are expected to provide students with the ability to explore different ideas in such a way that young school leavers can become self-reliant and as well should be able to engage themselves in functional trade/entrepreneurship skills needed for poverty eradication, job creation and wealth generation. The learning outcomes of economics and social studies would help the students to be more resourceful to themselves in particular and society at large. The achievement of these laudable objectives of economics and social studies as well as students' acquisition of its effective knowledge and skill can be acquired through proper teaching of the course by making use of appropriate teaching strategies such as scaffolding and guided enquiry.

Scaffolding instructional strategy is defined as the strategy used by the teachers to facilitate learners' transition from assisted to independent performance. Another definition is given by Bradley and Bradley (2004) as the "contextual supports for meaning through the use of simplified language, teacher modeling, visuals and graphics, cooperative learning and hands-on learning". Scaffolding is a teaching learning strategy in which the teacher and learners engage in a collaborative problem-solving activity with the support and guidance of the teacher to enable



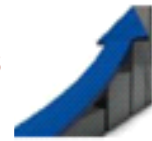
learners become increasingly independent (Richards & Schmidt, 2012). Scaffolding instructional strategy enables the teacher to introduce a topic by assisting the learners with various concepts until the learners gain independence in the topic to teach themselves. Scaffolding is a supportive approach for learner's convergent developmental area. It lies on a controlled support or assistance offered by an expertise person to remove the difficulty faced by a learner when they are not able to solve problems at their own. This type of support is totally temporary and is removed intelligently whenever the situation demands it (Akani, 2015).

Scaffolding refers to a support or a series of techniques which are used during a learning process aiming to bring maximum achievement, understanding and output. Its focus is to achieve the educational goals. It is a temporary, planned and progressive support provided by a teacher to his/her students to get a higher level of comprehension and helps in skill acquisition which is not possible for the students at their own without this support (Aditi 2017). Scaffolding may seem to help the learners to accomplish various tasks in Economics and Social Studies through a guided inquiry.

Guided inquiry is a teaching strategy which attempts to help learners ask questions and discover answers to their questions. Aliyu, (2015) opines that guided inquiry means careful planning, close supervision, ongoing assessment and targeted intervention by an instructional team of teachers through the inquiry process that gradually leads students toward independent learning. Guided-inquiry requires students to find out things for themselves. This cannot be done where the teaching method is lecture oriented. The use of guided inquiry strategy for teaching economics and social studies will motivate and interest students in a lesson. It focuses students' attention and initiates problem solving. If guided-inquiry for teaching economics and social studies are utilized, the students could be self-reliant after graduation (Nwafor & Oka 2016).

Guided inquiry activities help students to develop their individual responsibility, cognitive methods, report making, problem solving and understanding skills. According to Chibio (2012), guided inquiry approach can best facilitate focusing on learning the development of certain scientific concepts, but while the students in the teachers' guidance focus their attention on to the content, they have less suitable means for discovering scientific thinking processes and gaining experience. Scaffolding and Guided Inquiry In an economics and social studies classroom, differences in the degree of guidance and assistance from the teacher as well as the degree of students' participation in the teaching and learning process can influence to a great extent students' achievement in economics and social studies.

Scaffolding and Guided Inquiry instructional strategy are innovative instructional methods that involve active collaboration between the teachers and students. Unlike the conventional teaching method, the scaffold ensures that economics and social studies students are not left to their own devices to understand something, while the guided inquiry encourages investigation

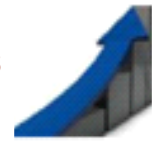


through questioning. The long-aged lecture method which is viewed as a one way flow of communication from the teacher to the students (Ricarda, 2015) is the most used teaching method in the classroom. The old method, conventional as it is, appears to reduce and kill students' interest and interests towards learning and thereby results to poor achievement. (Asogwa & Echemazu, 2011). Karakuyu (2010) sees achievement as the scholastic standing of a student's performance at a given moment. It also refers to cognitive score or learning outcome in a subject (Ezeudu, 2013).

Economics and social studies students' academic achievement determines the success of the entire teaching and learning process. It also evaluates the effectiveness of the instructional strategies used by teacher. Therefore, academic achievement is considered to be a comprehensive term that contains different dimensions of learning. The benefits of adopting the scaffolding and guided inquiry strategy in teaching and learning of economics and social studies outweigh the disadvantages that emanates in the use of the old conventional teaching methods. The benefits that are accrued to the use of scaffolding and guided inquiry strategy could lead to high retention and academic achievement among students in economics and social studies students. Aliyu (2015)

Vygotsky Constructivist Theory of 1978 states that learning takes place through personal construction of knowledge, ideas or views. The constructivists believe that the learner must take active part in the teaching and learning process. They believe in hands-on task learning. They contend that knowledge is constructed by the learner in an attempt to integrate existing knowledge with new experience. It allows learner to represent ideas visually, thus causing them to analyze, evaluate, and reason critically, all towards meaningful learning. John Dewey's Cognitive Theory of 1938 states that knowledge emerges only from situations in which learners have to draw them out of meaningful learning. Cognitive theories look beyond behavior to explain brain-based learning. The relevance of Dewey's theory in this study is that in the learning process, students must be engaged in meaningful activities that induce them to apply the concepts they are trying to learn. The teacher's role is to provide enabling environment for active learning to take place such an environment could be the guided inquiry strategy or approach. This will help the students to discover various modes of solving economics and social problems because they are exposed to interacting with other students in same field of knowledge.

Empirically, the study of Anum, Ogazi and Chris-obi (2021) found that Modelling and scaffolding methods are significantly effective in the improvement of students' academic achievement and developing positive interest in Economics. It was also found that teaching Economics to students using Modelling and scaffolding strategies increased the achievement and interest of male students than the female students. Ekomaye (2019) findings of the study revealed that the experimental group significantly scored higher in post-test than the control group. This is evidenced in  $H_01$ ,  $F(1, 93) = 85.476$  and  $P = 0.000 < \alpha = 0.05$ . The results also showed that gender



has no significant influence on mean achievement scores of students taught light and sound waves using GITM as revealed in H02,  $F(1,48) = 0.656$  and  $P = 0.413 > \alpha = 0.05$ .

There appears to be an increase in the level of low and poor academic achievement of students in Economics and Social Studies. However, the reasons behind students' failure in economics as speculated by Sabiru (2014) could be inadequate instructional materials, students' lack of interest in the subject, inappropriate use of teaching strategies amongst others. Shodeinde, (2015) reports also confirm poor academic performance of students in social studies. The above evidence can be used to lend support to the fact that the increase in poor academic achievement in economics and social studies among the students could be as a result of non-utilization of appropriate teaching strategies. Therefore, this study is posed as a question; could scaffolding and guided inquiry teaching strategies be effective in the improvement of students' academic achievement in Economics and Social Studies?

### **Purpose of this Study**

The main purpose of this study was to investigate the effects of scaffolding and guided inquiry instructional method on social science education students' achievement in Imo State University. Specifically, the study seeks to ascertain the:-

1. effects of scaffolding and lecture teaching methods on students' achievement in economics and social studies as measured by their mean scores in the pre-test and post test,
2. effects of guided inquiry and lecture teaching methods on students' achievement in economics and social studies as measured by their mean scores in the pre-test and post test,

### **Research Questions**

The following research questions were posed to guide the study:

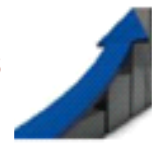
1. What are the mean achievement scores of students taught economics using scaffolding, guided inquiry and lecture method in the pre test and post test?
2. What are the mean achievement scores of students taught social studies using scaffolding, guided inquiry and lecture method in the pre test and post test?

### **Null Hypotheses**

The following null hypotheses were formulated and tested at 0.05 level of significance.

**H01:** The mean achievement scores of students taught economics using scaffolding, guided inquiry and lecture method in the pre test and post test are not significantly different.

**H02:** The mean achievement scores of students taught social studies using scaffolding and guided inquiry methods in the pre test and post test are not significantly different.



Methodology

The design of the study is the quasi-experimental research design which adopted the following procedures: pre-test, treatment, treatment and post-test for non-equivalent intact classes. It is a quasi-experimental, non-randomized pre-test, post-test approach. Two research questions and two hypotheses guided the study. The population of the study consists of a total of 1078 students from 100 level to 400 level. The sample consisted of 244 (200 level) students who offered Economics and Social Studies. Purposive and cluster sampling techniques were used to draw the sample for this study. An instrument titled "Economics Achievement Test (EAT) and Social Studies Achievement Test (SSAT). The (EAT) and (SSAT) was used to elicit the academic achievement of students in Economics as a subject both at pre-test, treatment and post-test. The initial draft copies of the instrument were given to five specialists. The instrument was validated by specialist in education measurement and evaluation and social science education with a reliability co-efficient index of 0.87 and 0.88 obtained using Kuder-Richardson 20 statistic (K-R 20). This was considered adequate for the study. Research questions was answered using mean and standard deviation. Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. But in the case of using SPSS, the rejection of the hypotheses was based on the comparison of the SPSS p-value or significance level in the output directly with the chosen 0.05 alpha level of significance. When the p-value is equal to or less than the chosen alpha, reject the null hypothesis, if otherwise, accept the null hypotheses.

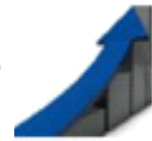
Result

Research Question 1: What are the mean achievement scores of students taught economics using scaffolding, guided inquiry and lecture method in the pre test and post test?

Table 1: Descriptive statistics for the mean achievement scores of students taught Economics using scaffolding, guided inquiry and lecture method in the pre test and post test

variables		Pretest		Posttest		Remarks	
Teaching Methods	N	( $\bar{X}$ )	SD	( $\bar{X}$ )	SD	Mean score	achievement
Scaffolding	42	18.00	2.036	33.12	2.725	15.12	
Guided Inquiry	39	18.82	1.862	32.69	2.028	13.86	
Lecture Method	41	18.88	1.778	21.27	1.628	2.39	

Table 1, presents the result of data concerning research question 1 for the mean achievement scores of students taught economics using Scaffolding, Guided Inquiry and lecture methods in the pretest and posttest. The result shows that students that were taught Economics



with scaffolding teaching method had pre-test achievement mean score of 18.00 and post-test mean score of 33.12. Those taught with guided inquiry teaching method had pre-test achievement mean score of 18.82 and post-test mean score of 32.69. On the other hand, the students that were taught with lecture method had pre-test achievement mean score of 18.88 and post-test achievement mean score of 21.27. Looking at the standard deviations, it was seen that the distance between the standard deviation and the mean scores of the groups shows that there is homogeneity of scores in the distribution. The gap in the mean scores of the three groups at posttest indicates that scaffolding and guided inquiry methods are effective in the improvement of students' achievement in economics more than the lecture method.

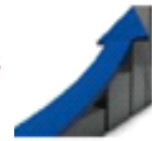
**Null Hypothesis 1:** The mean achievement scores of students taught economics using scaffolding, guided inquiry and lecture method in the pre test and post test are not significantly different..

**Table 2:** ANCOVA F-test Analysis for the achievement scores of students taught economics using scaffolding, guided inquiry and lecture method

Tests of Between-Subjects Effects					
Dependent Variable: Post Test					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3697.659 <sup>a</sup>	3	1232.553	257.719	.000
Intercept	938.675	1	938.675	196.271	.000
Pre_Test	2.420	1	2.420	.506	.478
Teaching_Methods	3661.095	2	1830.548	<b>382.755</b>	<b>.000</b>
Error	564.341	118	4.783		
Total	106864.000	122			
Corrected Total	4262.000	121			

a. R Squared = .868 (Adjusted R Squared = .864)

Table 2, presents the result of data concerning hypothesis 1 for the significant difference between the mean achievement scores of students taught Economics using scaffolding, guided inquiry and lecture method in the pre test and post test. It was indicated in the Table that the F-calculated (F-cal) value is high at 382.755. The p-value of 0.000 is less than 0.05 level of significance, leading to the rejection of the null hypothesis indicating that mean achievement scores of students taught Economics using scaffolding, guided inquiry and lecture method in the pre test and post test are significantly different.



**Research Question 2:** What are the mean achievement scores of students taught social studies using scaffolding, guided inquiry and lecture method in the pre test and post test?

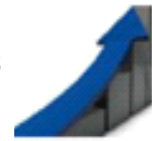
**Table 3:** Descriptive statistics for the mean achievement scores of students taught social studies using scaffolding, guided inquiry and lecture method in the pre test and post test

variables		Pretest		Posttest		remarks	
Teaching Methods	N	( $\bar{X}$ )	SD	( $\bar{X}$ )	SD	Mean score	achievement
Scaffolding	42	18.00	2.036	33.12	2.725	15.12	
Guided Inquiry	39	18.82	1.862	32.69	2.028	13.86	
Lecture Method	41	18.88	1.778	21.27	1.628	2.39	

Table 3, presents the result of data concerning research question 2 for the mean achievement scores of students taught social studies using Scaffolding, Guided Inquiry and lecture methods in the pre test and post test. The result shows that students that were taught social studies with scaffolding teaching method had pre-test achievement mean score of 18.43 and post-test mean score of 33.17. Those taught with guided inquiry teaching method had pre-test achievement mean score of 18.89 and post-test mean score of 32.72. On the other hand, the students that were taught with lecture method had pre-test achievement mean score of 19.34 and post-test achievement mean score of 21.27. Looking at the standard deviations, it was seen that the distance between the standard deviation and the mean scores of the groups shows that there is homogeneity of scores in the distribution. The gap in the mean scores of the three groups at post test indicates that scaffolding and guided inquiry methods are effective in the improvement of students' achievement in economics more than the lecture method.

**Null Hypothesis 2:** The mean achievement scores of students taught social studies using scaffolding, guided inquiry and lecture method in the pre test and post test are not significantly different.





**Table 4:** ANCOVA F-test Analysis of the mean achievement scores of students taught social studies using scaffolding, guided inquiry and lecture method

<b>Tests of Between-Subjects Effects</b>					
Dependent Variable:					
<b>Source</b>	<b>Type III Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Corrected Model	3314.165 <sup>a</sup>	3	1104.722	138.424	.000
Intercept	546.119	1	546.119	68.430	.000
Post_Test	6.046	1	6.046	.758	.386
Teaching_Methods	493.562	2	246.781	<b>30.922</b>	<b>.000</b>
Error	742.206	93	7.981		
Total	118581.000	97			
Corrected Total	4056.371	96			

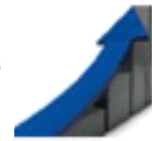
a. R Squared = .817 (Adjusted R Squared = .811)

Table 4, presents the result of data concerning hypothesis 2 for the significant difference between the mean achievement scores of students taught social studies using scaffolding, guided inquiry and lecture method in the pre test and post test. It was indicated in the table that the F-calculated (F-cal) value is high at 382.755. The p-value of 0.000 is less than 0.05 level of significance, leading to the rejection of the null hypothesis indicating that mean achievement scores of students taught social studies using scaffolding, guided inquiry and lecture method in the pre test and post test are significantly differed.

### **Discussion of Findings**

It was revealed in this study that students taught economics using scaffolding and guided inquiry methods achieved significantly more than students taught using lecture method. These findings is in consonance with finding Aditi (2017) results clearly revealed a significance difference in the mean scores in students Academic Achievement of the two groups i.e. Students taught by Scaffolding strategies performed much better than those taught by traditional methods. Nwafor and Oka (2016) found among others that guided inquiry teaching method had positive effect on the academic performance of Business Education students in principles of accounting.

The findings further revealed that social studies students taught with scaffolding and guided inquiry methods also performed better than who were taught with the conventional method. That is to say that those students in scaffolding and guided inquiry method groups significantly scored higher than those in the lecture method group. Scaffolding teaching method enables students to move step-by step from the identification of a problem defining the problem formulation hypothesis, collection of data, verification of results, and generalization to the drawing



of conclusion. It is techno-scientifically oriented and it places the learner's constructive mental ability first in all instructional processes. The findings of Akani, (2015) revealed that scaffolding instructional method has a significance difference in the mean scores of students taught chemistry than those taught with lecture method. This is a clear indication that students of scaffolding instructional group performed better than the lecture method group. In other words the two instructional strategies are learner centered. Again, the reason for this effectiveness is because guided inquiry method permits work in a classroom to be carried out in a friendly manner with the teacher as the motivating spirit and the students gladly do most of the work. In this respect, guided inquiry method seems to have the components to motivate teacher and students to develop cooperative work mainly aiming at the students to perceive and understand all the necessary stages required to arrive at logical conclusion. In agreement with this Similarly, Aliyu (2015) finding shows that guided inquiry is an effective mode of instruction for students in the secondary schools. The similarities recorded in this finding could be attributed to power of the improved teaching method over the lecture method in the improvement of students' achievement.

### **Conclusion**

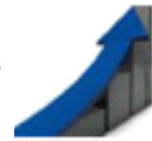
The study examines effects of scaffolding and guided inquiry instructional method on economics and social studies students' achievement in secondary schools in Imo State. From the study, it is concluded that for a teacher to attain effectiveness in the classroom, teaching strategies such as scaffolding and guided inquiry teaching method should be adopted and used effectively.

### **Recommendations**

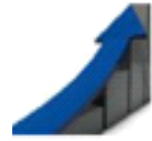
- 1) Curriculum planners such as NERDC should ensure that they are proactive in the incorporation of scaffolding and guided inquiry methods as part of the methods for teaching Economics and Social Studies in higher institutions, since it was found to be effective in enhancing students' achievement.
- 2) The Ministries of Education should through seminars, workshops, and conferences equip Economics and Social studies teachers with requisite knowledge, skills, and competences on the use of scaffolding and guided inquiry for teaching and learning of social studies so as to promote effective teaching and learning towards a better academic achievement.

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