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## Effects of Jigsaw Co-operative Instructional Strategy on Senior Secondary Students' Achievement in Civic Education

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### **Abstract:**

*The teaching of Civic Education is core curriculum activity expected to adopt learner-centred than the teacher-centred pedagogy. Observations have shown that Civic Education teachers in secondary schools only used the conventional strategies in their class room practices regardless of the emergency of research based co-operative instructional strategies such as Jigsaw. Hence, the study, focused on effects of Jigsaw co-operative instructional strategy on secondary school students' achievement in Civic Education. The main purpose of the study was to ascertain the effect of Jigsaw cooperative instructional strategy on students' achievement in Civic Education. One research question and one null hypothesis tested at 0.05 level of significance guided the study. The study was quasi-experimental in nature and adopted non-equivalent, pretest-posttest research design and the area of the study was Onueke Education Zone of Ebonyi State. The population of the study comprised of six thousand, one hundred and two (6,102) senior secondary school two (SSS II) students drawn from the sixty five (65) public secondary schools in Onueke Education Zone of Ebonyi State. The instrument used for data collection was Civic Education Achievement Test (CEAT), data were analyzed using mean and standard deviation for research question, and analysis of co-variance (ANCOVA) was used to test the null hypothesis at 0.05 level of significance. The findings of the study revealed that the mean achievement scores of secondary school students taught Civic Education using Jigsaw co-operative instructional strategy, was higher than the mean achievement scores of those taught Civic Education using conventional strategies. Based on the finding, it was recommended that Civic Education teachers should re-assess their classroom, instructional practice because there is a need for them to shift from instructional practice, which makes learners passive listeners to the practice that engages learners actively in the instructional processes.*

**Keywords:** Jigsaw, cooperative, instructional strategy, achievement, civic education.

### **1. Introduction**

One of the innovative elements in the curriculum of the new Nigeria educational system otherwise known as 9-3-4 system is the introduction of several new school subjects at primary and secondary levels of education. Undoubtedly, Civic Education is one of the subjects newly introduced in the Nigeria school curriculum. Its inclusion in the curriculum and elevation to the status of a compulsory subject to all students in Primary and secondary school levels of the Nigeria educational system is an indication of its perceived importance to Nigerians (NERDC, 2012).

Mbang, Okobia and Oyibe (2014) maintain that there are different definitions of Civic Education by different authors. According to them, Civic Education has been defined as an advanced Social Studies, citizenship education and even general studies. Others hold that Civic Education should be seen as educational, learning or professional activities carried out to enable people understand the ideas of democracy, develop reasonable commitment to the values and principles of democracy, be motivated to identify with areas of the political process they can participate in, and what they can do to influence political outcome and thereby improve the quality of government and governance (Oyeniya, 2013). This implies therefore that Civic Education is the discipline which the society uses to propagate the ideas, values and principles of democracy to the present and future generations. Hence, Mbang, et al (2014) maintain that Civic Education is a discipline that inculcates sound moral values of democracy and good governance in the youths. This may equally inform Oyeniya's (2013:92) view that Civic Education is expected to:

- Equip individuals in a society with the basic rules and institutional characteristics of democratic political systems and knowledge about working of government, constitution processes of public affairs, democratic rights and practices and roles of citizens.
- Enable the citizens to understand, respect and promote democratic values

- Create an environment that encourages individuals as well as collective responsible and informed participation in social and political process at the national, local and grassroots levels.

Therefore, Civic Education aims at helping young people to develop the ability to make decisions so that they can participate in determining the structures and compositions of the government of their own country and learn how to become actively informed and responsible citizens.

Akpochofa (2010) observes that the subject (Civic Education) varies in meaning and objectives from time to time and from place to place depending on the needs, aspirations and desires of citizens and the nation.

Presently, though there is no universally accepted definition of Civic Education, there are definitions that are acceptable at various places and occasions and for different purposes as far as they focused on the interrelationship between man and his social life as well as on the promotion of democratic society. Mbang, Okobia and Oyibe (2014:81) are of the view that, as a discipline of study in Nigeria educational system, Civic Education is presented by educators as a preparation ground for citizenship education, education for cultural integration and education for democratic living. This position has influenced the National Educational Research and Development Council (NERDC) (, 2007: 12) to adopt its official definition of the Civic Education as “an integrated study of social sciences and humanities to promote civic competence and help young people to develop the ability to make informed and reasoned decisions as citizens of a culturally, diverse, democratic society in an interdependent world”. Mbang, Okobia and Oyibe (2014: 82) insist that Civic Education should be seen as an advanced Social Studies and citizenship education since it focuses on providing knowledge, skills and attitudes that will enable people to understand their physical and human environment in order to act or behave as responsible citizens. This implies that Civic Education is the discipline that is concerned with educating the citizens of a particular place on their rights and duties as citizens of their nation.

Commenting on the importance of Civic Education to Nigerian society, Oyeniyi (2013) maintains that civic education remains an important means of teaching the populace about individual rights and what duties and responsibilities the governed and the leaders should do. The reintroduction of Civic Education as a subject to be taught in primary and secondary schools in Nigeria is expected to further deepen democratic culture and encourage qualitative participation of the average Nigerians in the governance. In the same line of thought, Ritter, Powell and Hawley in Ikwumelu and Oyibe (2014) opine that the introduction of Civic Education into school curricula is to teach citizens the virtues of good citizenship particularly the values of obedience, humility and submission to the constituted authority. In addition, Barton, McCully and Marks (2004) maintain that Civic Education will provide for citizens the basis for understanding of the rights and responsibilities of citizens as enshrined in the fundamental laws and a framework for competent and responsible participation in determining the structures and compositions of the government of such nation.

This is to say that Civic Education cultivates citizenry which participate in the public life of a democracy, use their rights and to discharge their responsibilities with the necessary Civic knowledge and skills. By so doing, it implies therefore that, Civic Education involves in the promotion of the rights and responsibilities associated with the practice of citizenship as it has become a critical and effective empowerment instrument for promoting citizenship participation in the democratic and development process.

An observation of classroom interaction of Civic Education in secondary schools indicates that all teachers are likely faced with the problem of how to effectively teach the curriculum content of Civic Education in order to achieve its stated objectives. This might be the reason why Ikwumelu and Oyibe (2011) maintain that when classroom teachers effectively teach the curriculum contents of a subject, it will instill in the students inquiry spirit that will bring about development of values in their own learning.

On the other hand, Downey and Kelly in Bozimo and Ikwumelu (2008:136) observe that “ineffective teaching does not encourage development of social awareness and social understanding because students still consider either to take for granted what their teachers offer or to reject it out of hand, probably as a result of utilization of inappropriate instructional strategies”. Mbakwem (2005:261) is equally of the view that “whether a subject is effective or not depends on the nature and quality of learning experience that are associated with it”. Ikwumelu and Oyibe (2011:65) add that “it is not only the content of the subject that determines its effectiveness but also the quality of learning experiences which in some cases are dependent upon teachers’ effective application of instructional strategies that enhance active participation of students in the classroom interaction”. They then advocated for the application of cooperative instructional strategy in carrying out Civic Education classroom interaction since the strategy aims at promoting maximum interaction between and among students in classroom setting to enhance efficient decision making while analyzing social issues.

Cooperative instructional strategy is a means of providing students with the opportunities to work together as a team in accomplishing a set of given objectives, (Slavin, 1990). According to Oleabhielle (2011:5), cooperative instructional strategy enhances the development of critical thinking through decision, negotiations, and clarification of ideas, because in cooperative instructional strategy, students enjoy the liberty of advancing their own ideas and benefit from the ideas of others. In addition, Oyibe and Nnamani (2014) opine that cooperative instructional strategy involves students in making connections between new and known information, engaging in dialogues in which hypotheses are formed, predictions are made, doubts expressed, uncertainties subsequently clarified and old views modified by the new views. It appears to be collaborative in nature and focus on individual accountability to the team success. This may be why Borich (2011) notes that cooperative instructional strategy is the strategy that relies on the philosophy that knowledge is essentially social in nature and learning is a social activity where students interact with others through communication and cooperative effects.

Explaining further, Slavin (2001) states that cooperative strategy is an instructional strategy in which students work in small, mixed-ability learning team. He goes further to explain that in cooperative instructional strategy, the students in each group or team are responsible not only for learning the materials themselves, but also for helping their teammates to learn. Slavin (2011) is of the view that cooperative instructional strategy comprises instructional methods in which teachers organize students into small groups, which

then work together to help one another learn academic content. Kagan (2009) provides an explanation of cooperative instructional strategy by looking at general structure, which can be applied to any situation. His explanation provides an umbrella for the work of cooperative instructional strategy specialists. He states that “the structural approach to cooperative instructional strategy is based on the creation, analysis and systematic application of structures or content free way of organizing social interaction in the classroom”. Omosehin (2003) simply holds that cooperative instructional strategy seems to be more useful than other instructional strategies.

In recent years, several studies and research work involving cooperative instructional strategy approach to classroom instruction have emerged as an internationally important area of education and social science research, (Slavin, 2011). Tran (2014) agreeing with the view of Slavin, (2011) maintains that many of these studies have been conducted in different settings of education, using different kinds of cooperative instructional strategy which Jigsaw classroom is one of them.

The Jigsaw grouping is a cooperative instructional strategy that reduces racial conflict among students, promotes better learning, improves students motivation, and increases enjoyment of the learning experiences (Joe, 2008). According to Borich (2011:326), Jigsaw classroom grouping is a research-based cooperative instructional strategy invented and developed to heighten the interest of the group members to learn more about the topic which they were not assigned to by listening to the teammates who received the assignment. Slavin (2011) maintains that, in the cooperative learning activities popularly known as Jigsaw classroom, the classroom teacher assigns students 4-6 member team to work on an academic task broken into several subtasks, depending on the number of groups. Borich (2011) adds that the teachers assign students to team and then assign a unique responsibility to each team member. For instance, assign to each team member a section of the text to read; then give each team member a special task with which to approach the reading and assign one member of the team to write down and look up the meaning of new vocabulary words, another to summarize or outline the main points in the text, another to identify major and minor characters and so on.

When all the teams members have their specific assignment, break out from each original team, all members with the same assignment (for example, finding and defining new vocabulary words); have them meet as an ‘expert’ group to discuss their assignment and to share their conclusion and results with one another. Within an expert group, members may assist each other group members by comparing notes, and identifying points overlooked by other group members. Then when all the expert groups have had the opportunity to share, discuss, and modify their conclusions, members then return to their respective teams and in turn teach their teammates about their respective responsibilities. As each member of a group has a piece of information needed to complete a group task in the learning activity, Jigsaw is a cooperative instructional strategy that requires everyone’s cooperative effort to produce the final product, (Mengduo and Xiaoling, 2010). In Jigsaw cooperative instructional strategy, each piece of information, and each student’s part are very important for the production and full comprehension of the final product. Therefore, if each student’s part is so important, then each student is important in Jigsaw classroom. This is precisely what makes Jigsaw cooperative instructional strategy effective for use in Civic Education.

Jigsaw appears to increase students’ learning since it is less threatening for many students and it increases the amount of students’ participation in the classroom interaction by reducing the need for competitiveness and teacher’s dominance in the classroom. This implies that if the classroom teachers effectively apply Jigsaw cooperative instructional strategy in teaching Civic Education, it will reduce students’ reluctance to participate in the classroom instructional activities and this may help them to create an active learner-centred atmosphere.

## 2. Statement of Problem

The teaching of Civic Education is a core curriculum activity which is supposed to be implemented through a learners-centered than teachers-centered approach. This is because its inclusion of the subject into a Nigerian Education System came at a time when Civic training seems to be needed most in the society as disrespect for the dignity of Nigerian Nation and disregard to honesty, mutual love, patriotism and value re-orientation is common.

There may be need to consciously and carefully develop in the citizens those values and skills that will enable them to have concern for public life and to actively participate and contribute positively to the political process of democracy. This calls for effective teaching and learning of Civic Education in Nigerian schools. This is because effective teaching and learning of Civic Education may inculcate in the youths the desirable social and civic skills for promoting democratic governance.

Since Civic Education is expected to contribute in measurably to achieving conducive atmosphere for participatory democratic processes, there is a need to revisit the teaching and learning of the subject, including the methods applied by the civic Education teachers in classroom interaction considering the emergence of research-based cooperative strategies such as Jigsaw. Jigsaw model reduces racial conflicts among students, promotes better learning, improves students’ motivation and increase enjoyment of learning experiences. The strategy which seems social in nature encourages the development of critical thinking through discussion, negotiation and clarification of ideas, it may makes students to learn better among themselves through active involvement and enhances higher academic achievement. In Ebonyi State, especially in Onueke Education Zone; it has been observed, Jigsaw cooperative instructional strategy has not been used in teaching Civic Education in Secondary School. The problem of this study therefore is ‘what is the effect of Jigsaw cooperative instructional strategy on senior secondary school students’ achievement in Civic Education in Onueke Education Zone of Ebonyi State?’.

### 2.1. Purpose of the Study

The main purpose of this study is to ascertain the effect of Jigsaw cooperative instructional strategy on senior secondary school students’ achievement in Civic Education in Onueke Education Zone of Ebonyi State. Specifically, the study aims at:

### 2.2. *Research Questions and Hypothesis*

One research question and one null hypothesis tested at 0.05 level of significance guided the study:

1. What is the effect of Jigsaw cooperative instructional strategy on students' mean achievement in Civic Education in Onueke Education Zone of Ebonyi State?
2.  $H_0$ : There is no significant main effect of Jigsaw cooperative instructional strategy on secondary schools students mean achievement in Civic Education.

### 3. **Methodology**

Non-equivalent, pretest-posttest control group design was adopted by the researcher in carrying out this study. The study is Quasi-Experimental in nature. The above research design was considered suitable for the study because intact classes were used and randomly assigned to both experimental and control groups. Intact classes were used because of the period which the study lasted and it was not proper to disrupt normal classes.

#### 3.1. *Population of the Study*

The population of this study comprised of Six Thousand, One Hundred and Two (6,102) senior secondary students two (SSSII) in all the sixty-five (65) public secondary schools in Onueke Education Zone SSSII classes were used because they were more stable and amendable to the study than other senior secondary school levels. It is not an external examination class and civic education is also taught in the class.

#### 3.2. *Sample and Sampling Techniques*

The sample of the study is five hundred and eighty one (581) students which represented 10% of the entire population of six thousand, one hundred and two (6,102). The researcher adopted multistage sampling techniques where in the first stage, Onueke Education Zone was stratified into four (4) Strata, each stratum represented a Local Government Area. Two (2) Local Government Areas were randomly selected through balloting with replacement. One (1) Local Government Area made up of (186) students of (76) males and (110) female was randomly assigned to experimental group while the other Local Government Area made up of (395) students of (188) male and (207) female was assigned to control group. Two (2) schools; one (1) from urban and one (1) from rural areas were conveniently selected from each Local Government Area. The SSSII class from the selected schools gave the total sample of five Hundred and eight one (581) students.

#### 3.3. *Instrument for Data Collection*

The instrument for data collection in this study was fifty (50) item Civic Education Achievement Test (CEAT). The CEAT was made up of two major sections thus; Section A and Section B. Section A contained information on the personal data of the respondents while Section B contained information that dealt with Civic Education Achievement Test questions.

#### 3.4. *Validation of the Instrument*

The Civic Education Achievement Test (CEAT) validated by three experts from Social Studies and two specialists in Measurement and Evaluation in Ebonyi State University, Abakaliki for relevance, clarity, proper wordings and adequacy of items in addressing the objectives of the study.

#### 3.5. *Reliability of the Instrument*

The instrument with fifty (50) question items were treated to determination of reliability using twenty (20) students selected from another secondary school outside the zone of study Kuder Richardson 20 (KR-20) statistics was used to obtain a reliability coefficient of 0.94 which showed a high internal consistency; thereby making the instrument suitable for use for the study.

#### 3.6. *Method of Data Collection*

At the beginning of the experiment 'Civic Education Achievement Test (CEAT)' was administered to both treatment and control groups as pretest. The class teachers performed this in the classroom. At the end of the test, scores of the students on the pretest were recorded and kept. The same instrument was administered to the students at the end of the experimental period and their achievements recorded.

#### 3.7. *Method of Data Analysis*

Mean and standard deviation were used to answer the research questions while the analysis of co-variances (ANCOVA) was used to test the null hypotheses at an alpha level of 0.05.

### 4. **Results**

Research Question 1: What is the effect of jigsaw cooperative instructional strategy on students' mean achievement in Civic Education in Onueke Education Zone of Ebonyi State?

Scores	Experimental Group (N=186)		Control Group(N=395)		Mean diff.
	Mean	SD	Mean	SD	
Pretest	49.835	6.3195	47.846	5.3195	1.989
Posttest	79.925	8.2196	51.846	7.1793	28.079
Grand Mean	128.85	14.44	43.98	19.97	

Table 1: Effect of jigsaw cooperative instructional strategy on students' mean achievement in Civic Education in Onueke Education Zone.

Table 1 showed that pretest mean and standard deviation achievement scores of experimental group are 49.835 and 6.3195, while that of control group is 47.846 and 5.3195 with mean difference of 1.989. It could be observed that the two groups are in the same achievement baseline prior to instructional treatment. However, the posttest mean and standard scores of experimental group are 79.925 and 8.2196, while that of control group are 51.846 and 7.1793 with mean difference of 28.079. This showed that experimental group achieved higher than that of the control group after instructional treatment. Therefore, jigsaw cooperative instructional strategy had positive effect on students' mean achievement in Civic Education in Onueke Education Zone of Ebonyi State.

**H<sub>01</sub>:** There is no significant effect of jigsaw cooperative instructional strategy on students' mean achievement in Civic Education in Onueke Education Zone.

Source	Type III Sum of Squares	DF	Mean Square	F	Sig.
Corrected Model	99713.859 <sup>a</sup>	2	49856.929	878.730	.000
Intercept	54318.799	1	54318.799	957.370	.000
Pretest	12.247	1	12.247	.216	.642
Method	55478.918	1	55478.918	977.817	.000
Error	32794.279	578	56.738		
Total	2282713.000	581			
Corrected Total	132508.138	580			

a. R Squared = .753 (Adjusted R Squared = .752)

Table 2: Analysis of Covariance on the significant effect of jigsaw cooperative instructional strategy on students' mean achievement in Civic Education.

Table 2 above, revealed that showed the value of F-Sig (0.000) is less than value F-Cal (977.817) at 0.05 level of significance that is  $P < 0$ . This means that the null hypothesis which stated that there is no significant effect of jigsaw cooperative instructional strategy on students' mean achievement in Civic Education in Onueke Education Zone is rejected. This means that jigsaw cooperative instructional strategy has significant effect on students' mean achievement in Civic Education.

## 5. Discussion

### 5.1. Effects of Jigsaw Cooperative Instructional Strategy on Students' Mean Achievement in Civic Education.

The findings of data analysis presented in table 1 revealed that Jigsaw co-operative instructional strategy was better than the conventional strategy in enhancing secondary school students' achievement in the interaction effects of instructional strategies and gender on students' achievement in Civic Education. From the results presented in table 1, it was observed that the experimental group (Jigsaw co-operative strategy) obtained a high mean score of 79.925 and standard deviation of 8.2196 against the control group (conventional strategies) that obtained low mean score of 51.847 and standard deviation of 7.1793. This implies that application of jigsaw co-operative instructional strategy enhanced students' achievement in Civic Education more than the use of conventional strategies.

In addition, the findings of test of the significant effect of strategy on the mean achievement of students taught Civic Education using Jigsaw co-operation instructional strategy and those taught Civic Education using conventional instructional strategy in analysis of covariance (ANCOVA) table 2 revealed that the value of F-sig (.000) was lower than the value of F-cal (977.817) at 0.05 level of significance, this indicated that hypothesis 1 was therefore rejected. This implies that there was a significant effect on mean achievement of secondary school students taught Civic Education using Jigsaw co-operative instructional strategy than other strategies

The finding is in line with the view of Borich (2011) who stated that Jigsaw co-operative instructional strategy promotes maximum interaction between and among Civic Education students to enhance efficient decision making while discussing and analyzing social issues. Teo (2006) added that jigsaw co-operation instructional strategy involves students in making connections between new and already known ideas or facts, engaging in dialogues in which hypotheses are formed, predictions are made, doubt expressed, uncertainties subsequently clarified and the orthodox/traditional views modified by new ideas. This is to say that the strategy encourages the development of critical thinking through discussion, negotiations and clarifications of basic content or ideas because in Jigsaw learning, students enjoy the liberty to advance their own ideas and to benefit from the ideas and views of others.

### 5.2. Conclusion

The findings of the study revealed that students taught Civic Education using Jigsaw co-operative instructional strategy performed better than those taught using conventional instructional strategy. It is also the opinion this study that teachers should use Jigsaw co-operative instructional strategy in teaching and learning of Civic Education. Students' achievement will improve and Civic Education

classroom interaction will be more participatory and interesting. Therefore, achieving Civic Education instructional and programme objectives will be easier when student-centered teaching and learning strategy such as Jigsaw is used.

### 5.3. Recommendations

It is the recommendation of the study; that Government through its educational agencies should lay more emphasis on utilization of Jigsaw co-operative instructional strategy by secondary school teachers in Civic Education classroom for effective delivery, while Civic Education teachers should re-assess their classroom instructional practice because there is a need for a shift from instructional practice, which makes learners passive listeners to the practice that engages learners actively in the instructional processes.

### 5.4. Educational Implications of the Study

This empirical study has shown the effects of Jigsaw co-operative instructional strategy on students' achievement in Civic Education. The findings of this study have some implications for Education generally and for effective pedagogy in Civic Education in particular. The findings of this study will justify the urgent need for secondary school teachers to effectively utilize Jigsaw co-operative instructional strategy in Civic Education classroom interaction in order to enhance students' achievement in both internal and external examinations. Thus, there is a need for Ministry of Education to organize seminars and workshops for training and retraining of Civic Education teachers on Jigsaw co-operative instructional strategy for effective instructional delivery in Civic Education classroom.

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