

EFFECT OF INSTRUCTIONAL METHOD AND SCHOOL LOCATION ON STUDENTS ACADEMIC ACHIEVEMENT IN SOCIAL STUDIES IN DELTA STATE

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Abstract

The study examined the effect of instructional method and school location on students academic achievement in Delta state. The study was a quasi-experimental design (2x2 non-randomized pretest - posttest control group). The population for the study consisted of 50,321 secondary school students. The sample consisted of 120 Upper Basic II students drawn from four intact classes in secondary schools in Delta State. The sample was drawn using stratified random sampling technique to ensure the representation of both sexes of students. The instrument used for the study was the Social Studies Achievement Test ('SSAT,). The instrument consisted of 50 multiple choice items drawn from Basic Education School Certificate Examination past questions as set by the Ministry of Education, Asaba. The reliability of the instrument was determined through test-re-test and estimation of internal consistency method. This yielded a reliability coefficients of 0.68. Two research hypotheses were generated and tested. The data were analysed using t-test. The study revealed that there are significant difference in terms of treatment group (Jigsaw,) and school location on students academic achievement in Social Studies. Based on the findings of the study, it was recommended among others that Social Studies teachers should try hard to input interactive activities in their teaching and learning process in Social Studies classes so to make the lesson interesting, motivating and attractive to students to learn; teachers should be given in-service training on a regular basis on the use of activity based instructional methods especially the jigsaw instructional method.

The longing of any society is the progress and elevation of its members and to have wise and intellectual citizens. It is obvious that any kind of progress in different areas such as culture, economy, society, politics and the like requires having sensible, creative, and critical people who can make the right decisions and can have the right planning. This depends on the existence of active and dynamic systems of education (Yazdianpoor, 2009). Thus, any kind of progress could be as a result of an effective and efficient system of education.

The method to be used for effective teaching and learning is a matter of grave concern to teachers and educationists. It has also been noted that lecture method commonly used for teaching/learning process in Nigerian schools is not so effective because the students are not given the opportunity to interact with the environment and maximally develop their intellectual capabilities (Abdu-raheem, 2011). Adeyemi (2007) stated that teaching is a process of facilitating students learning through a proper management by the teacher of the interrelationships among the students' interest, the content for learning and the methods and materials he or she intends to use in the teaching and learning of the content materials. It may involve giving instruction to somebody on knowledge, skills and attitudes with the intention that the person will be able to know the information or do

something or act in a particular way that is compatible with the instruction. The person who gives the instruction may be a learner, pupil, student or trainee. The means employed by the teacher to communicate to the learner would determine ultimately, if he or she is teaching, instructing, training, or indoctrinating and so forth. It should be noted that knowledge impartation is never possible without a good technique to execute it. It is only when knowledge is inculcated through good technique and one makes sure that the learner has gained something useful; which can make his/her experience relatively permanent that one can say that learning has taken place. There has been knowledge inculcation without a method to do so, whether the method is adequate or not is another factor (Adeyemi, 2007).

The ultimate goal of Social Studies is to nurture in learners good citizenship with full emphasis on the development of those rational habits of mind and humane attitude that should enable individual learners to make informed decisions about personal and social matters (Akinlaye, Mansaray & Ajiboye, 2014). The present trend is towards making Social Studies content relevant to the growth and development of both the individual and the society. The development of skills required for this, calls for adequate training of teachers which should include the introduction of appropriate methods of teaching the subject. Osho (2014) remarked that the selection and proper usage of the appropriate and effective method or methods is very crucial to the success of a lesson because a teaching method determines whether a teacher is communicating with his pupils or not and consequently the extent and depth to which the lesson objectives would be attained. Ogunyemi (2014) opined that the ultimate goal of teacher preparation in Social Studies is to translate the broad objectives of Social Studies into concrete and achievable tasks under a teaching-learning situation. Salia-Bao in Nwalado (2014) observed that, in most developing countries, Nigeria inclusive, the lecture method is still popular in spite of its obvious and serious limitations. Even though, it is the easiest, cheapest and most familiar, she described it as the most abused and least effective in many respects.

It is evident that falling back on mere routine traditions of school teaching is no longer satisfactory in a technologically advanced world, there is therefore the need for more dynamic and pragmatic teaching strategies to reflect the ever-changing nature of our society (Osho, 2014). Ajelabi in Nwalado (2014) opined that there is the need to introduce, adopt and adapt the latest instructional techniques which are capable of sustaining the interest of the learners. The reality is that traditional teaching methods, due to different reasons, are not able to respond to recent changes and are not in line with goal of teaching human resources that the modern society needs. Thus, it is important to replace them with modern and revolutionary methods (Khodadadnezhad, 2009). Right from time past, the conventional lecture method of imparting knowledge has been in use. The relevance of the conventional lecture method and its attendant criticism are what have been giving educationists sleepless nights and making them to think of other better methods of imparting knowledge. Many methods have been propounded by many educators which include jigsaw and group learning methods (Adeyemi, 2007).

Jigsaw is a cooperative learning task that requires learners to communicate with each other in order to fill in missing information and to integrate it with other information. According to Clarke (1994) jigsaw method is that in which, each member of a cooperative-learning group becomes “specialized,” mastering a discrete part of the subject matter required to complete the project.

According to Berkeley-Wykes (2014) jigsaw is a method in which a concept is cut into segments and the task of the students is to restore it to its proper order - to make sense of the concept. If used as a group activity where students discuss the decisions of how to order the segments of the text, it can elicit a great deal of communicative interaction.

Jigsaw is one of the methods that have widely been used for years (Doymus, 2007). It is a group-based learning in which students need to cooperate with their peers in order to achieve personal goals. Each student is like a piece of puzzle who needs to understand and learn the subject completely (Aronson, 2002). Jigsaw instructional method adds variety to the teacher's repertoire. It helps teachers manage large classes of students with diverse needs. It improves academic achievement and social development. It prepares students for increasingly interactive workplaces. However, one of its most powerful, long-lasting effects may be in making school a more humane place to be by giving students stable supportive environments for learning. Teachers who teach Social Studies content through jigsaw instructional method promote learning because such strategy produces greater academic learning and better inter-group relationships among diverse ethnic and ability groups. According to Yusuf (2004), jigsaw method is a promising new educational approach.

In contrast to individual or competitive learning environments, a jigsaw learning group is structured so that all members of the group are dependent on each other to complete an assignment successfully. The result is a group product and the group as a whole shares the reward. Studies of jigsaw learning experiences shared by ethnically or otherwise mixed groups consistently indicate numerous positive cognitive and affective outcomes (Brandt and Meek, 2014). These include enhanced academic learning, improved self-esteem and more frequent social interactions among majority/minority member outside of the learning group, enhanced feelings of trust and acceptance by peers and teachers, expression of more altruistic feelings, and increased acts of cooperative behaviour in other settings (Brandt and Meek, 2014).

The question of whether schools location differs significantly in impacting on students' academic performance is essential in education. Playing an important role in students' knowledge is school location (Agboghroma, 2009). School location in this study refers to the location of schools, whether urban or rural. This study will link students' academic performance and school location to instructional strategy. This line of research is important, as students academic performance may be related to school location. Parents and guardians attach so much importance to good performance and exposure to be well abreast with global events. This has caused students and parents alike to move their wards from one school to another, especially from rural to urban schools in order to gain improved aptitude to perform academically to meet the expectations of their parents and their desires or life goals (Obiyai, 2010).

In recent times body of researchers has began to examine how well students perform in urban or rural schools (Ajayi and Ogunyemi, 1990; and Gana, 1997; Ajayi, 1999; Owoeye (2002) and Yusuf and Adigun, 2010). Although the results are far from conclusive, they do suggest that some generally held beliefs on academic performance of students based on location need review. The results on who is better academically between urban and rural students have been inconclusive. There is need to find out if the location of a school affects students academic performance. The researcher wishes to investigate the effect of jigsaw and group instructional methods on Social Studies students' academic performance. The study also determined the effects of gender and school location. The present paper is therefore aimed to investigate the influence of location on students academic achievement in social studies in Delta State.

Purpose of the Study

1. To find out whether there is any significant differences in the mean achievement scores of students taught Social Studies using the conventional lecture method (control group) and those in the experimental group (Jigsaw).
2. To ascertain if there is any significant differences in mean achievement scores of students in urban and rural locations taught Social Studies using the jigsaw method.

Research Questions

1. Is there any significance difference in academic achievement mean scores of students taught Social Studies using jigsaw instructional method and those taught using the lecture method?
2. Is there any significance difference in academic achievement of urban and rural students taught Social Studies using jigsaw instructional method?

Research Hypotheses

The following hypotheses guided the study and were tested at .05 level of significance.

Ho₁: There is no significant difference between the post-test mean scores of students taught using the jigsaw instructional method and those taught using the lecture method.

Ho₂: There is no significant difference in academic achievement of urban and rural students taught Social Studies using jigsaw instructional method.

Methodology

The study design was a quasi-experimental nonrandomized pre-test -post-test control group design. It utilized a 2 x 2 factorial design in which the independent variables are the three levels of instructional methods (jigsaw versus lecture method) and location of students and the dependent variable was students' achievement in Social Studies. The population for the study consisted of 50,321 Upper Basic II secondary school students in Delta State. The sample consisted of 120 Upper Basic II students drawn from four intact classes in secondary schools in Delta State. The sample was drawn by stratified random sampling technique. The instrument used for the study was the Social Studies Achievement Test (SSAT) designed by the researcher. The instrument consisted of 50 multiple choice items drawn from Junior School Certificate Examination past questions as set by the Ministry of Education, Asaba, Delta State of Nigeria and was based on Upper Basic II Social Studies syllabus. It was used as pre-test and post-test respectively. The validity of the instrument was ascertained by three experts, one in Measurement and Evaluation and two in Social Studies. Face, content, construct validity and item analysis procedure were done to validate the instrument. The reliability of the instrument was determined through test-re-test and estimation of internal consistency method. This yielded a reliability coefficient of .68. The students were initially given a pre-test to check their level of knowledge and were then randomly assigned to experimental and control groups where they were exposed to different treatment. The experimental group was exposed to treatment through jigsaw instructional methods while the control group continued with their lessons through the lecture method. The SSAT test was administered six weeks after the experiment. The data were analysed using t-test.

Results

Hypothesis 1

There is no significant difference between the post-test mean scores of students taught using the jigsaw instructional method and those taught using the lecture method.

Table 1: t-test Analysis of Post-test Achievement of Students

Group	N	\bar{X}	SD	df	Z-cal	Z-crit	Decision
Experimental	62	70.79	11.95	118	8.21	±1.96	S
Control	58	54.46	10.81				

Table 1 showed that there was a significant difference between the post-test mean scores of students taught using the jigsaw instructional method and those taught using the lecture method. This is because the calculated Z (8.21) is greater than the critical Z (±1.96) which means that the jigsaw instructional method improve the academic achievement of students in Social Studies. The null hypothesis was rejected. Thus, there was a significant difference between the post-test mean scores of students taught using the jigsaw instructional method and those taught using the lecture method.

Hypothesis 2

There is no significant difference in academic achievement of urban and rural students taught Social Studies using jigsaw instructional method.

Table 2: t-test Analysis of Post-test Achievement of Students and Location

Group	N	\bar{X}	SD	df	Z-cal	Z-crit	Decision
Urban	68	55.29	10.85	118	2.04	±1.96	S
Rural	52	50.88	12.51				

The result in table above showed the analysis of the post-test achievement scores and it indicates that there is significant difference in the academic achievement of students based on location at the end of the treatment. The hypothesis is therefore rejected. This is because the calculated Z (2.04) was greater than the critical Z (±1.96). This implies that there was a significant difference between urban and rural students academic achievement in Social Studies using jigsaw instructional method. On examination of the post-test scores, it was discovered that students in urban location was 55.29 and the students in rural location was 50.88. This implies that the urban group has a better academic achievement than their rural counterpart.

Discussion

The findings of hypothesis I revealed that those students taught with jigsaw instructional method performed better than those taught with lecture instructional method. This finding indicated that instructional method is a significant factor in the achievement of students in Social Studies. This means that students taught with jigsaw instructional method achieved better than those taught with the lecture method. This result therefore gives further credence to Don, Yeroslaviski & Lazarowitz (2014), Walker and Crogan (2014), Holliday (2000) and Aronson (2005) who reported that instructional method has significant effect on students academic achievement in Social Studies.

Furthermore, the results of this study is in agreement with Gömleksi'z (2007), Sedat Maden (2010), Ali, Hossein & Mahin (2012) and Mahn (2012) who reported that students exposed to jigsaw instructional method improved significantly and were found to be more effective than the lecture method. This confirms the views of Ali Gocer (2010) and Yasemin, Kemal, Ataman and Umit (2010) that activity oriented instructional method bring about understanding and retention of information which in turn provide support for the findings of the present study. The result of this study also revealed that students' achievement is positively affected by the use of jigsaw instructional method. Based on the fact that significant difference exists between the treatment and control groups in relation to their academic achievement, it encourages positive changes in attitude and behaviour of students towards Social Studies. The findings indicated that students poor academic achievements are partly due to the method of teaching used in teaching and learning process. There is therefore a general consensus that jigsaw instructional method enhances teaching and learning and leads to better students' achievement.

It could be keenly observed from the analysis of data in respite of that there is also significant difference between urban and rural students academic achievement in Social Studies at the posttest level. Urban students gained more in achievement slightly than their rural counterparts. This findings is in agreement with those of Akpochafo (2001), Jianzhong Xu (2009), Agboghroma (2009), Okereke (2010) and Owoeye (2011) who observed that school location or setting (urban or rural) influences students' academic achievement and that location of the school has great effect on students intellectual performance. However, the findings of the study contrast those of Considine and Zappala (2002), Obomanu and Nbina (2010), Yusuf and Adigun (2010) and Borisade (2011) who in their studies reported that school location significantly predict outcomes in academic achievement. Students academic achievement in Social Studies is dependent on the type of environment under which teaching took place. The finding of this study has revealed that teacher's role is not only that of a facilitators whose task is to provide a suitable environment in which students are presented with new opportunities for learning, but his task includes encouraging students motivation so that their academic performance of students could be improved.

Conclusion

The findings of this study established that instructional method has a significant influence on students academic achievement in Social Studies. The result of study indicated that the jigsaw instructional method improved the performance of students. This study also revealed that instructional method and school location significantly influence students academic achievement in Social Studies. It found out that school location positively influence or impact on students academic achievement in Social Studies. Students in urban schools significantly improved their performance compared to students in rural schools in Social Studies. This means that that both variables (jigsaw instructional method and school location) should be considered in the teaching and learning process in Social Studies classroom.

Recommendations

1. Social Studies teachers should try hard to input interactive activities in their teaching and learning process in Social Studies classes so to make the lesson interesting, motivating and attractive to students to learn.

2. Teachers should be given in-service training on a regular basis on the use of activity based instructional methods especially the jigsaw instructional method
3. Since the jigsaw instructional method have been empirically established as having effect on students academic achievement in this study, Social studies are advised to use the jigsaw instructional method in the teaching and learning process as it would help to improve students academic performance and while doing this special attention may be attached the location of students involve.

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