**Unveiling the Academic Tapestry: Exploring the Impact of Teamwork, Sequence and Brainstorming Learning Strategies on Urban and Rural Junior Secondary School Students in Social Studies in Delta State**

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## Abstract

*This study investigated the impact of Teamwork, Sequence, and Brainstorming Learning Strategies on the Academic Performance of Upper Basic School 9 (JSS3) Students in Social Studies in public schools in Delta North Senatorial District. Delta State, Nigeria. This study adopted quasi-experimental research design. As a result of the use of multi-stage sampling approach, 6 schools were sampled with the participant's size of 720 from where 70 percent was adopted to arrive at the sample size of 504 for the study. In this study Teacher-Made Test in Social Studies (TMTSS) was used as instrument to collect data to assess academic performance, and data analysis involves descriptive and inferential statistics. Results indicate a significant difference in academic performance between urban and rural students taught with Teamwork, Sequence, and Brainstorming strategies, aligning with previous studies emphasizing the urban advantage. The study concludes by recommending tailored educational interventions to address the performance gap and emphasizes the importance of professional development for educators to adapt strategies.*

**Keywords:** Teamwork, Sequence, Brainstorming Learning Strategies, Academic Performance,

## Introduction

In the realm of education, the quest for optimal learning strategies remains a perpetual pursuit, and the link between teaching methodologies and academic performance stands as a cornerstone in this exploration. This article endeavours to unravel the intricate tapestry of academic achievement, specifically focusing on the upper basic social studies domain within both urban and rural educational landscapes. Through an in-depth analysis, this article dissects the impact of teamwork, sequence, and brainstorming learning strategies on the academic performance of students, delving into recent research findings to shed light on the nuanced interplay between pedagogical approaches and scholastic success. Academic performance, a multifaceted construct, encompasses a spectrum of outcomes including grades, comprehension, retention, and critical thinking skills. As highlighted by Hattie's meta-analysis (2009), academic achievement is a complex amalgamation influenced by various factors, both internal and external to the classroom. In urban areas, students often encounter a fast-paced, competitive academic environment, while their rural counterparts contend with distinct challenges such as limited resources and potential isolation. The impact of these contextual disparities on academic performance underscores the necessity for tailored investigations into the efficacy of teaching methods across these settings.

Teamwork, a collaborative learning approach, has been celebrated for its potential to foster critical skills essential for academic success. Recent research by Dyer et al. (2021) underscores the positive correlation between teamwork activities and academic achievement, highlighting the development of communication skills, interpersonal relationships, and a sense of collective responsibility among students.

Brainstorming, a dynamic and creative pedagogical tool, introduces an element of divergent thinking that may significantly impact students' problem-solving abilities and critical thinking skills. Recent studies by Kim and Paulus (2019) shed light on the cognitive benefits of brainstorming sessions, suggesting that the collaborative nature of idea generation can enhance academic performance. Majority of studies that investigated the relationship between school location and academic performance attempts to clarify the notion that school located in the urban areas tend to have more attention as against those located in the rural areas. This observation prompts studies to determine that students in the urban school performed better than their counterparts in the rural areas. Xu (2009) appears to lean towards supporting the idea that the aspirations of rural youth lag behind those of their urban counterparts. This implies that differences exist in the way students learn in urban and rural school location. The advantage urban schools have over rural schools is linked to provision of school facilities, availability of instructional materials, adequate number of subject-teachers and exposure to city life such as social amenities, good roads, means of transports, electricity, communication network system, public libraries and places of tourism that increase interest of learning and independent studies among students. The abundance

of human resource because of high population in the cities makes it possible for a greater level of interaction with resource persons outside the school time and among other potential opportunities that faster education of children.

This article will delve into the nuanced ways in which teamwork influences academic performance, considering potential variations in its efficacy between urban and rural settings. Sequential learning strategies, characterized by a systematic and organized delivery of educational content, have been recognized as influential contributors to academic success. The work of Anderson and Dron (2011) emphasizes the cognitive benefits of well-structured instructional sequences, showcasing their role in promoting deeper understanding and knowledge retention. Our examination will explore how the structured nature of sequential learning impacts the academic performance of upper basic social studies students, drawing attention to potential contextual variations.

Owoeye and Yara (2011) stated that school location refers to the particular place in relation to areas in the physical environment consisting of rural and urban where the school is sited. Researchers seem to agree at different level of the influence location has on student's learning outcome. The study by Mhiliwa (2015) studied "The Effects of School Location on Learner's Academic Performance". The author examined the extent to which distance affected the academic achievement of students in community secondary schools in Makambak, Town Council. The study was guided by four specific objectives, which were carried out through descriptive cross-sectional study design. Data were collected using semi-structured interview guide, questionnaire officers, and 200 (80 boys, 120 girls) students. These study respondents were sampled through simple random and purposive sampling technique in which SPSS and inductive analysis procedures were employed to analyze their responses. The study found that longer distance traveled by students to school makes them reach schools late and with empty stomachs. It indicates that location of school has led to mass failure to most of students, due to long walk among students have cause dropout from school and most of girls' student get pregnancy thus fails to attain their educational goals. These findings are attestation of the fact that location of student has influence on their learning outcome. The findings also support the view that academic performance in urban and rural is measure in line with the student location.

The study on the "influence of school location on students' attitude towards Mathematics and Basic Science" was conducted in Cross River State, by Ntibi and Edoho (2017). The study adopted one research question and one hypothesis which was tested at 0.05 level of significance. One hundred and sixty-six (166) students formed the sample of the study. Two (2) validated and reliable instruments, namely Mathematics and Basic Science, Achievement Test (MBSAT) and Students Location Test (SLT) were used to collect data for this study. Analysis of the data results showed that, there was no significant difference in the mean performance scores between urban and rural school students with positive attitude towards Mathematics

and Basic Science using the independent t-test analysis. The finding suggests that the variables of attitude and location are important in the measure of student's academic performance.

Elah and Ita (2017) determined the correlation relationship between school location and academic performance in English language in secondary schools in Ogoja Local Government Area. The study adopted a survey research design, using 200 sampled figures, where 124 representing 62% were males, while 75 representing 38% were female. Instrument of data collection was an achievement test. The result of the t-test analysis revealed that there is a significant difference in students' academic performance in English language on the basis of location. The finding shows that there is gap in the performance of urban student to that of rural students' academic performance. This finding is sustained in the study by Awodun and Oyeyini (2008). They found that there is difference in the achievement mean scores of students in urban and rural school areas, in subject area relating to Junior Secondary School Basic Science in Ekiti State. It means that the concern about how to improve academic performance in the ground of students' location is a growing concern in education in Nigeria. Nworgu and Nworgu (2013) found that there is an urban – rural disparity in achievement at the Basic Education level. His study was a response to the plight of the rural child in a developing country. He indicated that academic performance measure tends to favour urban students in the curve matrix. The defect is blamed on government in-action to develop the rural areas.

The study conducted in Bayelsa State appears to suggest that there is government neglect on rural schools with a long effect on students' performance due to the rural disadvantage condition they found themselves. In this regards, Uzobo, Ogbanga, and Jack (2014) investigated "Government educational policies and rural educational development" to find out the existing disparity between urban and rural educational development in the study area. The study was based on the observed poor state of the rural schools and their predicament accompanied by unfavorable government education policies towards rural school areas. The authors claimed that relevant literature reviewed showed that the rural schools in Nigeria are in a sorry state. The study was hinged on the urban bias theory for its theoretical framework. The design of the study consists of an exploratory and survey respectively. A sampled population of 226 was the number of persons sampled for the study. The mean, standard deviation and chi – square ($X^2$) were the statistical tools for the data analysis. The study revealed that government educational policies are not geared towards the development of the rural education sector as almost all the rural human, and materials education resources are poor and unattended to.

The suggestion drawn on the above conclusion is that rural deficiencies are created by lack of political will. The effects go down to affect the education system of rural students with the resultant outcome on poor performance in their external examinations. It means that the exiting disparity between urban and rural students'

performance is a creation of lack of government attention to put in place the facilities that will promote and encourage high performance among students from the rural areas so that there is a bridge in the gap in academic performance of both. This finding was upheld in a study conducted in Oyo State by Oyeroni, Omoyale, Lato, and Oyebamiji (2018). The study was an analysis of students' academic performance in rural / urban public schools in the state. Performance was examined in two core subject areas of English Language and Mathematics. Four questions were stated to guide the study, which were eventually tested. The descriptive survey research design was employed that enable the study to interface with 40 (20 rural and 20 urban public senior secondary schools), 6996 students' results and 4083 rural students results. Students' performance was low when comparing results of rural and urban finding in this study substantiate the claim of previous studies that discovered that rural students are disadvantaged and have low academic performance.

A study in Ghana conducted by Nana and Abena (2015) focuses on "Rural – Urban Disparity in Students' Academic Performance in Visual Arts Education: Evidence from Six Senior High Schools in Kumasi, Ghana". The authors found that rural – urban disparity in economic and social development in Ghana has led to disparity in educational resources and variation in student's achievement in different parts of the country. They observed that senior high school in rural and urban schools follow the same West Africa Senior Secondary Certificates Examination (WASSCE) which qualifies them to access higher education in the universities. The authors argued for the need of the study by alluding to the fact that urban schools are also recognized as good schools where students make it to the university. They noted that performance patterns with regard to admission of SHS graduates into university also vary between rural and urban schools, consequently some parents do everything to get their children in urban cities, even consenting to placement in visual arts, a programme deemed appropriate only for academically weak students.

Thus, the study therefore adopted the qualitative – quantitative research approach with interview, observation, and questionnaire administration to investigate the critical factors that affect academic performance of Senior High School students, particularly those in visual arts as case study. Finding from six public SHSs in Kumasi – two each in rural, peri – urban, and urban areas – revealed that urban schools perform better than rural and peri – urban schools because they attract and admit junior high school graduates with excellent Basic Education Certificate Examination (BECE) grades, have better infrastructure, more qualified teachers, prestigious names, and character that motivate their students to do well. This suggests that bridging the rural – urban gap in educational resources could promote quality teaching and learning and thereby raise academic achievement for Senior High School students in Ghana as well as in other West African countries like Nigeria.

Idoli and Ummanah (2011) investigated the comparative disparity in Oral English amongst students of urban and rural areas in River State secondary schools. To guide

the study, two research questions were formulated for testing. Eighty (80) students were sampled from eight (8) secondary schools, four (4) from rural areas and four (4) from urban areas in River State. For the purpose of data collection, a questionnaire was utilized. Data was analyzed using independent t-test and one way analysis of variance. Results indicated significance and non-significance on the part of school location and teachers qualification respectively. The implication of the finding shows that there is disparity in Oral English amongst students of urban and rural areas. This indicates that rural students' performance is always behind those of their urban counterparts.

Ovansa (2017) compared facilities and students performance in Biology in urban and rural schools in Adavi local government of Kogi state. Correlation and ex-post-fact researches were used in the study. The population of the study consisted of all biology teachers in the public schools used in this study and their principals. Questionnaires were used to collect information on availability of biology teaching resources and students' performance in biology for the period of 2011 to 2015. The outcome of the study indicated that most rural schools lack adequate facilities for teaching and learning of biology and thereby brings about disparity in the

academic performance of students in West African Examination Council. This result is a pointer to the fact that rural schools are at disadvantage and this would continue to affect students' academic performance so long the teaching and learning facilities do not encourage improved teaching and as such it shows on their performance at the external examination on a yearly basis. Except government step-up rural school facilities, engaged qualified and appropriate subject-teacher, the likelihood of urban migration cannot be discouraged and youth drifting from the rural area to urban could be lightened for the sake of pursuing quality of life supposedly found in cities.

**Statement of the Research Problem**
The academic performance of students constitutes a critical benchmark for evaluating the effectiveness of educational systems. In the context of Delta State, Nigeria, understanding the current status of students' performance in upper basic social studies becomes paramount for shaping educational policies and practices. The need to address this issue is underscored by the broader significance of academic excellence in the education sector and its implications for the future success of students. Academic performance serves as a tangible indicator of the quality and efficacy of educational programmes. It is not merely a reflection of individual achievements but also a collective measure of the overall health of the educational system. The ability of students to comprehend, retain, and apply knowledge in upper basic social studies not only influences their immediate academic trajectory but also shapes their preparedness for higher education and real-world challenges.

Understanding the current status of academic performance in Delta State among upper basic social studies students is imperative. Variations in urban and rural settings

within the state further complicate this scenario, given the potential disparities in available resources, educational infrastructure, and socio-economic conditions. These factors may contribute to differences in academic achievement between urban and rural students.

Despite the recognized importance of academic performance, there exists a gap in the literature concerning the influence of specific learning strategies on the academic outcomes of upper basic social studies students in Delta State. Teamwork, sequence, and brainstorming learning strategies represent promising approaches that, if harnessed effectively, could potentially address challenges faced by students in both urban and rural contexts. Therefore, the central problem to be addressed in this study is: What is the difference between the academic performances of urban and rural Upper Basic Social Studies students taught with Teamwork, Sequence, and Brainstorming Learning Strategies in Delta State? By delving into this inquiry, we aim to contribute valuable insights that can inform educational stakeholders and policymakers in Delta State, fostering a more holistic and tailored approach to promoting academic excellence in the region.

**Purpose of the Study**

This study was mainly carried out to determine the efficacy of Teamwork, Sequence and Brainstorming Learning Strategies on the academic performances of students in Upper Basic Secondary School Social Studies in Delta State. The study specifically examined the difference in the academic performance of Upper Basic Students in Social Studies taught with Teamwork, Sequence, and Brainstorming Learning Strategies in Urban and Rural in Delta State.

**Research Question**
One question was raised to guide the study.
1. What is the difference between the academic performances of Upper Basic Students in Social Studies taught with Teamwork, Sequence, and Brainstorming Learning Strategies in Urban and Rural Area in Delta State?

**Research Hypothesis**
One null hypothesis was formulated and tested at 0.05 level of significance.
**Ho:** *There is no significant difference between the academic performances of Upper Basic Students in Social Studies taught with Teamwork, Sequence, and Brainstorming Learning  Strategies in Urban and Rural Area in Delta State.*

## Methodology

This study adopted a quasi-experimental design involving the pre-test and post- test for the treatment and control group. It specifically consists of pre-test, post-test experimental and control group with one dependent variable- academic performances and independent variable of learning strategies and moderating variable- location. In executing this study, one research question and one hypothesis were raised to guide this study.   The population targeted for the study consisted of Upper Basic 9 (JSS3) Social Studies Students in Public Schools in Delta North Senatorial District, Delta State, Nigeria which comprised of 161 Schools with students population of 14,952. The random sampling methods which involved multi-stage, balloting, purposive sampling and the use of appropriate percentage for the selection of proportionate number of students (participants) was utilized. As a result of the use of multi-stage sampling approach, 6 schools were sampled with the participant's size of 720 from where 70 percent was adopted to arrive at the sample size of 504 for the study.

The researcher adopted one instrument for the study. This was a teacher-made test in Social Studies (TMTSS). The instrument consisted of 50 objective question items treating some selected themes in the JSS3 Social Studies Scheme of Work for second term lasting for the period of six (6) weeks. The instrument of this study was subjected to face and content validities through careful judgment of Social Studies Specialist, other members of the Department of Social Science Education, Faculty of Education, Delta State University, Abraka. The researcher generated data on pre-test and post-test scores from the participants. From the first test, a mean performance score of 65.170 and standard deviation 8.579 were recorded. On the second test, a mean test performance score of 82.101 and standard deviation of 8.417 were obtained. Generated scores from these pre-field investigations were analyzed based on the Pearson Moment Correlation statistics, obtaining 0.86 coefficients. In order to obtain an appropriate test of significance, generated scores were subjected to both descriptive statistics of mean (x) and standard deviation was used to answer the stated research question. Inferential statistics of t-test were used to test the postulated hypothesis.

## Results

## Answering of Research Question

**Research Question:** What is the difference between the academic performances of Upper Basic Students in Social Studies taught with Teamwork, Sequence, and Brainstorming Learning Strategies in Urban and Rural Area in Delta State?

**Table 1: Descriptive Statistics of Mean and SD Showing the Performance of Rural And Urban Students Taught Using Teamwork, Sequence and Brainstorming Learning Strategies in Delta State.**

| Method | Location | N | Mean ($\bar{x}$) | Mean Diff | SD |
|---|---|---|---|---|---|
| | Rural | 21 | 32.048 | | 4.829 |
| Teamwork | Urban | 82 | 38.695 | 6.647 | 6.148 |
| | Rural | 29 | 33.655 | | 4.352 |
| Sequence | Urban | 83 | 36.337 | | 6.197 |
| | | | | 2.682 | |
| | Rural | 18 | 31.500 | | 4.475 |
| Brainstorming | Urban | 82 | 37.183 | 5.683 | 5.275 |

Table 1 shows that the students taught with teamwork from urban location had a mean score of 38.695 and a SD of 6.148 while other counterparts from rural location had a mean score of 32.048 with an SD 4.829. The students from urban location scored more than those from rural location with a mean difference of 6.647. For those taught with sequence teaching strategy, the urban students had a mean score of 36.337 with a SD of 6.197 while their counterparts from rural location had a mean score of 33.655. Those from urban location scored more than the rural counterparts with a mean difference of 2.682. Brainstorming strategy who are in urban location had a mean score of 37.183 and a SD of 5.275 while those from rural location had a mean score of 31.500 with a SD of 4.475. The urban location students scored more than the rural location students. This shows that there is a difference in the mean score of students taught with the teaching methods in urban and rural location. To determine if the difference is significant, independent sample t-test was used to test the hypothesis as shown in table 2 below.

**Testing of Hypothesis**

**Research Hypothesis**
**Ho:** *There is no significant difference between the academic performance of Urban and Rural students of Upper Basic Social Studies taught with Teamwork, Sequence and Brainstorming Learning Strategy in Delta State.*

**Table 2: Independent Sample T – Test Showing Difference in Mean Scores of Upper Basic Social Studies Students in Urban and Rural Location Taught With Teamwork, Sequence and Brainstorming.**

| Method | Location | N | Mean | Mean Diff. | SD | T | Df | Sig (2 tail) | Decision |
|---|---|---|---|---|---|---|---|---|---|
| | Rural | 21 | 32.048 | | 4.822 | | | | |
| Teamwork | Urban | 83 | 38.698 | 6.647 | 6.148 | 4.070 | 110 | .000 | Rejected |
| | Rural | 29 | 33.655 | | 4.352 | | | | |
| Sequence | Urban | 83 | 36.337 | | 6.197 | | | | |
| | | | | 2.682 | | 3.134 | 99 | 0.020 | Rejected |
| | Rural | 18 | 31.500 | | 4.475 | | | | |
| Brainstorming | Urban | 82 | 37.183 | 5.683 | 5.275 | | | | |
| | | | | | | 3.259 | 101 | 0.002 | Rejected |

Table 2 shows that there is a significant difference in the performance of students taught with Teamwork, Sequence and Brainstorming strategies base on location. This is because the calculated sig. values of 0.000 (Teamwork) 0.02 (Sequence), 0.002 (Brainstorming) are lesser than the critical sig. value of 0.05. With this, $Ho_1$ which states that there is no significant difference between the academic performance of Urban and Rural students of Upper Basic Social Studies taught with Teamwork, Sequence and Brainstorming Learning Strategy in Delta State was rejected.

**Discussion of Findings**
Findings from Table 1 and 2 show that rural students of Upper Basic Social Studies taught with Teamwork, Sequence and Brainstorming Learning Strategies achieved less than urban students of Upper Basic Social Studies taught with Teamwork, Sequence and Brainstorming Learning Strategies. Based on the hypothesis, the study shows that there is significant difference between the academic performances of rural and urban students of Upper Basic Social Studies taught with Teamwork, Sequence and Brainstorming Learning Strategies in Delta State. Nnenna and Adukwu (2018) who asserted in their study that there was significant difference in the achievement mean scores of students in rural and urban school location areas. They observed that urban students achieved higher than rural students. It is stated that learning in urban and rural areas differs considerably due to factors of their social demographical characteristics. Majority of studies that investigated the relationship between school location and academic performance attempts to clarify the notion that school located

in the urban areas tend to have more attention as against those located in the rural areas. Nworgu and Nworgu (2013) found that there is an urban – rural disparity in achievement at the Basic Education level. They observed that academic performance measure tends to favor urban students in the curve matrix. Xu (2009) opined that the advantage urban schools have over rural schools is linked to provision of school facilities, availability of instructional materials, adequate number of subject-teachers and exposure to city life such as social amenities, good roads, means of transports, electricity, communication network system, public libraries and places of tourism that increase interest of learning and independent studies among students. This observation prompts studies to determine of students in the urban school performed better than their counterparts in the rural areas.

**Conclusion**

The study revealed a significant difference in academic performance between rural and urban upper basic social studies students in Delta State when taught using Teamwork, Sequence, and Brainstorming Learning Strategies. This underscores the need for context-specific educational interventions to address the observed performance gap and promote equitable learning outcomes in diverse settings.

**Recommendations**

- School management should focus on enhancing access to learning resources, providing additional academic support, and implementing community-based educational programs to effectively bridge the performance gap.
- Training programmes should focus on equipping teachers with the skills to adapt these strategies to diverse urban and rural contexts.

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