Relationship Between Teachers' Instructional Practices and Students' Performance in Social Studies in Colleges of Education in North East, Nigeria

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Abstract

This study investigated the relationship between teachers' instructional practices and students' social studies performance in northeastern Nigeria colleges of Education. The study raised three objectives and answered three research questions. The descriptive survey and correlational research designs were adopted for the study. The population comprised 5,735 Social Studies students and 39 Social Studies teachers in federal and state colleges of Education in the northeast geographical zone of Nigeria. A systematic sampling technique was used to select a sample for the study; the sample used was 16 social studies teachers and 351 students in the four colleges of Education in the northeast geographical zone of Nigeria. Two instruments were used: studies of teachers' instructional practices, classroom observation checklist, and Social Stuthe social studies performance result record. Five Social Studies Education, Research, Measurement, and Evaluation experts determined the validity of the three instruments from the Faculty of Education, University of Jos. The reliability of the instruments was established using inter-rater methods of reliability, which yielded a reliability index of 0.874 for the teacher's instructional practices classroom observation checklist. The statistical tools used in answering research questions were mean and standard deviation. The findings revealed that teachers in social studies mostly use lecture, discussion, and questioning teaching methods. The inquiry method, problem-solving method, simulation method, dramatization, construction method, presentation, and concept mapping are teaching methods teachers in social studies rarely use. It revealed a significant relationship between the teaching methods, instructional materials, teachers' questioning techniques, social studies teachers' lesson presentations, teachers' evaluation techniques, and students' performance in social studies. It further indicated that students' performance relative to teachers' instructional practices in state and federal education colleges differs.

Keywords

Instructional Practices; Performance; Social Studies



I. Introduction

Social Studies instructional practices encompass the components of teaching, such as what to teach, how to prepare, and who is to teach. This involves lesson planning, use of prior knowledge, setting behavioral objectives in alignment with educational domains, applying instructional materials, choosing teaching methods, and evaluating student learning. Best instructional practices, including those studying Social Studies, serve as guidelines for effective teaching to enhance student performance. Teaching is a multifaceted process that relies on strategic planning to make instructional practices effective. Lesson planning, for instance, involves systematically organizing resources to

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achieve specific educational objectives, ultimately influencing student performance in schools and colleges. A well-structured lesson plan is essential for meaningful learning in Social Studies; otherwise, the teaching process may become disorganized, affecting student outcomes negatively. Teaching effectiveness varies depending on individual teachers' goals and the methods they adopt, as supported by Oti, Ariya, and Salau (2020), who highlight the importance of purposeful lesson planning in achieving instructional goals.

In preparing Social Studies lessons, teachers must clearly state behavioral objectives that align with cognitive, psychomotor, and affective domains. These objectives guide the design of learning activities to meet specific goals, thereby enhancing student performance. Obiagu, Onwuzurike, Agbo, and Mezieobi (2022) emphasize that aligning learning activities with clearly defined objectives helps improve student outcomes in Social Studies. Instructional materials also play a vital role in teaching and learning, stimulating interest and enhancing understanding. Teachers are encouraged to carefully select and utilize these materials to make lessons engaging and relevant, boosting student performance. Introducing a lesson is another critical aspect of instructional practices that can significantly impact student performance. Eze (2016) notes that how a lesson is introduced can determine its success or failure. Effective introductions connect new content with previous knowledge, creating deeper learning. Teachers often question or review past lessons to prepare students for new material, ensuring a smooth transition and better comprehension.

Teachers apply the planned materials, knowledge, and learning strategies in the presentation stage. The chosen teaching methods, such as project-based, discovery, or inquiry approaches, depend on the subject matter and are integral to engaging students. Each technique offers varying levels of teacher supervision and student independence, fostering skills like creativity, critical thinking, and curiosity, which are crucial for improving performance in Social Studies. To be effective, instructional practices must also consider students' needs, cognitive abilities, and developmental levels. Teachers must adapt their methods based on student feedback and classroom dynamics, modifying their approaches to address learning gaps and enhance student engagement. Evaluation is vital to instructional practices, allowing teachers to assess student understanding and adjust their strategies accordingly. A summative assessment, conducted after lesson presentations, helps gauge the effectiveness of the instruction and identifies areas for improvement.

The conclusion of a lesson is the final phase of instructional practice. It involves summarizing key points and ensuring students grasp the essential concepts. Proper conclusion techniques reinforce learning and help solidify students' understanding, which is crucial for sustained academic performance. Maintaining records of lessons also guides future instructional decisions, contributing to the ongoing improvement of teaching practices. Social Studies aims to develop students' cognitive skills, values, and attitudes as an integrated study of humans and their environment. Instructional practices in Social Studies focus on fostering an understanding of interconnected knowledge areas to address social issues. Social Studies content enhances social literacy rather than just mastery of isolated facts, underscoring the importance of effective teaching strategies.

The relationship between instructional practices and student performance is significant, as the methods employed by teachers directly influence learning outcomes. Ojedokun (2018) describes instructional practices as tools that propel students forward in their learning journey, helping them think critically and solve problems. This connection

emphasizes the importance of using appropriate methods and techniques to improve student performance, especially in the context of Social Studies in Nigerian colleges. Despite the potential benefits, the impact of instructional practices on student performance can be either positive or negative. Stakeholders have expressed concerns about the declining performance of Social Studies students, particularly in the northeast of Nigeria. This decline is attributed to variations in instructional practices, where teachers often prioritize convenience over student-centered approaches, resulting in suboptimal learning outcomes. Research suggests that ineffective instructional practices contribute to students' lack of competency in Social Studies, ultimately affecting their academic performance.

Social Studies instructional practices are a crucial factor in shaping student outcomes. Effective planning, utilization of instructional materials, appropriate teaching methods, and thorough evaluation processes are essential components that drive successful learning. Addressing these instructional challenges is vital for improving Social Studies education, particularly in the North East region, where inconsistencies in teaching practices have raised concerns about student performance. Refining and adapting instructional strategies is imperative to enhance the educational experiences and achievements of Social Studies students.

1.1 Aim and Objectives of the Study

This study aims to determine the relationship between teachers' instructional practices and students' performance in Social Studies in colleges of Education in North Nigeria. Specifically, the objectives of the study are to:

- 1. find out the types of methods Social Studies teachers use and the students' performance.
- 2. determine the adequacy of content coverage in social studies by teachers.
- 3. establish the relationship between lesson presentation adopted by social studies teachers and students' performance.

1.2 Research Questions

The following research questions were answered in the study

- 1. What are the teaching methods used by social studies teachers?
- 2. What is the adequacy of course lesson topics covered by social studies teachers?
- 3. What is the relationship between social studies teachers' lesson presentations and students' performance?

1.3 Theoretical/Conceptual Framework

Walberg's theory of academic achievement (1998) underpins this study, emphasizing that effective teaching practices—such as time management, positive reinforcement, cues and feedback, classroom control, and higher-order questioning—are crucial for enhancing students' performance. Walberg argues that how a teacher manages lesson time, handles distractions, and maintains discipline significantly impacts learning outcomes. Positive reinforcement motivates students by sustaining their interest and fostering independent learning, while cues and feedback enhance the questioning process, providing students with necessary guidance and encouraging deeper engagement. Furthermore, Walberg highlights the importance of higher-order questioning, which prompts students to engage in complex thinking and reflection, enhancing learning. The theory also stresses the need for a conducive classroom environment that supports learners' physical and mental well-being. The implication of this theory for the study is that the effectiveness of teachers' instructional practices extends beyond content knowledge and lesson mastery. Effective practices include managing classroom conditions, using constructive feedback, and incorporating higher-order questioning to encourage thoughtful student responses. Thus,

teachers need classroom control and discipline management to communicate effectively, ultimately enhancing their instructional practices in teaching Social Studies.

II. Review of Literatures

2.1 Concept of Teacher Instructional Practice

Teachers' instructional practices are general principles, guidelines, and suggestions for good and effective teaching supported by research. To support this task expected by the teachers in 1987, the National Board for Professional Teaching Standards (NBPTS) was established in 1981. The Board, according to Kar., Lee, and Ho (2023), was to identify what teachers should know on the five core propositions that form the foundation of skills, knowledge, disposition, and beliefs for effective teaching. These five core propositions emphasize what teachers' instructional practices are all about as these have bearings on the subject they teach and how to teach the subject to students, and be responsible for managing and monitoring students learning; teachers' thus, are to think systematically about their practices and learn from experience Teachers' are a member of the learning committees. Teachers' instructional practices focus on stand-in Education with the recent state-wide high-stakes assessment. Such testing has received a disproportional amount of attention in the practicing profession of teaching, as opined by Tigelaar and Beijaard (2013). They further argued that formative assessment is at the heart of effective teaching.

Focus, another instructional practice, is an intentional structure for observation and dialogue. Practical teaching assessment as part of instructional practice by teachers is consistent with the point that observation is just one mode of assessing effectiveness. The fact that there is an emphasis on planning and preparation indicates that much of what makes teaching effective may not be directly observed during a lesson (Shulman, 2013). Many teachers recommend a multimodal approach as part of their instructional practices in assessing teachers' effectiveness. The intent of this is to focus on those practices that are evidenced in the classroom. Teachers' instructional practices are part of teaching as a profession. Thus, teaching is an interacting transaction where knowledge is constructed and reconstructed by both teachers and learners. Teachers place critical emphasis on these instructional practices in teaching-learning. The emphasis is on the outcome of what students acquire in cognitive knowledge, dispositions, skills, behaviors, and values. These outcomes will impact their lives as adults and members of our community and serve the best interest of our society. Given the importance of teachers' instructional practices and students' performances in social studies, there is a need to examine the relationship between the two since nothing has been done, especially in colleges of Education.

2.2 Concept of Social Studies

Various scholars in social studies shared similar views on what social studies is. In 1992, the Board of Directors of the National Council for Social Studies held that social studies is the integrated study of social science and humanities that promote civic competence within the school program. Social Studies provides coordinated and systematic study, drawing content from geography, history, philosophy, political science, psychology, religion, sociology, as well as the natural sciences. Babatunde (2010) explained that social studies consists of knowledge, skills, processes, and values to which learners are exposed in order for them to achieve stated educational purposes successfully. Furthermore, Balyejusa (2019) maintained that social studies content is primarily made up of facts and statements that can be proven true. Ezegbe (2013) held that apart from social science, other subject areas like literature, poetry, art, music, and drama can contribute

valuable insight for children and adults in their study of human groups. The learners themselves are still another source of content for social studies.

2.3 social studies objectives

The five main national objectives of Nigeria, as stated in the second national development plan (NDP) and endorsed as a necessary foundation for the national policy on Education (NPE), are building a Free and democratic society: A society that is free to join any association, free to practice any religion, to speak one's opinion and free to move. Also, a society that elects its leaders and free to vote for anybody of their choice and be voted for (Mezieobi, 2016): A society that will be equal in terms of seeing individuals as human beings and a society that will contribute towards the development of society and individuals among others. Therefore, Nigeria's philosophy of Education based on the integration of the National Development Plan (NDP) and National Policy on Education (NPE) is to develop individuals into sound and influential citizens with equal educational opportunities at all levels of Education, both inside and outside the formal school system. Thus, the quality of instruction must be oriented towards inculcating values such as Respect for anything essential and Respect for an individual in the society, whether Moslem, Christian, or believer of any religion, and respect him/her as a human being in the society and faith in man's ability to make a rational decision.

Moral and spiritual values should be inculcated in individuals and the entire society. People should be guided by their moral behavior and spiritual belief in individual and human relations and share responsibility for the common good of society. Individuals should be able to share good things by changing their opinions and quotas toward society. Promotion of all citizens' emotional, physical, and psychological health (Mezeiobi, 2016). There should be the development of a sound mind and good health of the individual in the society that will be inculcated into the healthy living of an individual. Social studies objectives from the preceding are derived from the National Development Plan (NDP) and National Policy on Education (NPE) to achieve the aspirations of national educational objectives goals, such as national consciousness, national unity, development of positive attitudes toward democratic values and citizenship as well as train and develop skills for acquisition of knowledge (Zevin, 2015) covers the three educational domain that is (cognitive, psychomotor, and practical) that as ascribed to as primary objectives of social studies. (Zevin, 2015).

2.4 Instructional Materials for Social Studies Teaching

Teachers' instructional practices involve communication and, as a result, demand the use of instructional materials. The integrated nature of social studies makes it possible for various instructional materials to be used in teaching and learning for good results from teachers and students. In this section, the researcher intends to review the instructional material available in teaching and to learn social studies to mine the relationship between them and the existence of social studies' performstudiesnstructional materials are objects, places, and persons, otherwise known as information conveyors, constituting an integral and vital component of teachers' instructional practices. Okam and Mamkvis (2014) and Mezieobi (2016) all classified instructional materials into three broad categories:

- a. textbooks in disciplines like Economics, Sociology, and Political Science. Instructional materials thus include the following:
- b. Booklets on family life, ethnic groups, First World War, and professional organizations.
- c. Reference materials like atlases, encyclopedias, gazettes, yearbooks, dictionaries, and
- d. Current events materials like newspapers, magazines, and journals.

- e. Self-help materials like charts, study guides, and workbooks
- 1. Audio-Visual Materials: As the name implies, these are the materials that the sense of hearing and sight make use of in effective instructional practices that yield better performances in social studies students. They include the following:-
- a. Sound and film include, for example, Radio, Television, Videotape or cassette recordings, and picture and pictorial representations like photography, drawings, sketches, slides, postcards, prints, murals, storyboards, and scrapbooks.
- b. Regalia or representations like objects, tools, utensils, dolls, documents, clothing textiles, paints, specimens, rock samples, building materials, collections of models, and exhibits.
- 2. Community Resources: It is the community where the students learn about the social process and interaction firsthand. In their instructional practices, social studies teachers invite community personalities into the classroom as guest speakers on a relevant topic to the context of social studies. Some agencies in the community include the following.
- a. Commercial centers include Banks, Markets, Hotels, and factories, as well as Post offices, NITEL, NEPA, Universities, and Hospitals.
- b. Recreational centers include zoos, bars, beaches, amusement parks, stadiums, and village squares.
- c. Transportation places include railway stations, airports, seaports, and motor parks.

Field trips are often encouraged to the zoo, amusement parks, museum, hatchery forestry, housing estate, farm and ranch, and resource visitors, including chiefs and village heads. Some of the instructional materials and resources commonly used in the social studies instructional practices that often affect the performance of students are discussed below.

III. Research Method

The study employed descriptive surveys and correlational designs. The survey concerns existing conditions, prevailing practices, and people's beliefs and attributes. The study population consisted of all Social Studies students pursuing the Nigeria Certificate in Education in federal and state colleges of Education in the northeast zone of Nigeria, totaling 5,735 students and 39 teachers across nine colleges. The researcher selected four out of these nine colleges for the study. The sample size used for the study was 367 (Teachers' and students) in four COEs in the study area. The sampling technique used in the study was systematic. Two instruments were used for data collection, which are the Social Studies Teachers' Instructional Practices Classroom Observation Checklist (SSCOC), Social Studies Student's Performance Result Record (SSSPRR), and Social Studies Teachers' Interview (SSTI). The validity of SSOC was determined through expert judgment, the Validity of Social Studies Students' Performance Results (SSSPRR) was subjected to the scrutiny of two experts in Social Studies and one expert in research, Measurement, and evaluation and Validity of Social Studies Teachers' Interview (SSTI) was subjected to the scrutiny of two experts in Social Studies Education and one expert in Test and Measurement. The reliability of the instruments (SSCOC) and social studies teachers' instructional practices was determined through the inter-rater reliability estimate, computed using Cohen Kappa statistics. A reliability coefficient of 0.874 was obtained.

IV. Results and Discussion

Research Question One: What teaching methods are used by social studies teachers?

Table 1. Teaching Methods Used by Social Studies Teachers'

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S/N	TYPES OF	MFU	\mathbf{FU}	\mathbf{OU}	\mathbf{RU}	NU	N	\mathbf{X}	StD	Decision
	METHODS USED									
1	Lecture	8	5	3	-	-	16	4.31	.793	Used
2	Discussions method	5	5	3	3	-	16	3.75	1.125	Used
3	Inquiry method	-	-	-	8	8	16	1.50	.516	Not used
4	Problems solving method	-	-	-	10	6	16	1.63	.500	Not used
5	Simulation method	-	-	-	8	8	16	1.50	.516	Not used
6	Dramatization	-	-	-	9	7	16	1.56	.512	Not used
7	Construction method	-	-	-	-	16	16	1.00	.000	Not used
8	Questioning method	-	7	5	4	-	16	3.19	.834	used
9	Presentation	-	-	-	10	6	16	1.63	.500	Not used
10	Concept mapping	-	-	-	-	16	16	1.00	.000	Not used

Most Frequently used (5), Frequently used (4), Occasionally used (3), Rarely used (2) and Not used (1)

Table 1 shows the result of the analysis of teaching methods used by teachers in social studies in colleges of Education in North East Nigeria. From the table, items 1, 2, and 8 have mean scores ($\overline{\mathbf{X}} = 4.31$, 3.75, and 3.19) above the criterion mean of 3.00, indicating that teachers in social studies use lecture, discussion, and questioning teaching methods. Also, items 3, 4, 5, 6, 7, 9, and 10 have ($\overline{\mathbf{X}} = 1.50$, 1.63, 1.50, 1.56, 1.00, 1.63 & 1.00) mean scores below the criterion mean of 3.00. This means that inquiry, problem-solving, simulation, dramatization, construction, presentation, and concept mapping are teaching methods not used mainly by teachers in social studies.

Research Question Two: What is the adequacy of course course topics covered by social studies teachers?

Table 2. Adequacy of Content Coverage by Social Studies Teachers'

S/N	Content	HA	A	FA	NA	N	X	StD	Decision
1	Definition and scope of social studies	9	7	-	-	16	3.56	.512	Adequate
2	Historical development of social studies	9	5	2	-	16	3.44	.727	Adequate
3	Philosophical background of social studies	9	7	-	-	16	3.56	.512	Adequate
4	Concept of curriculum integration	12	2	2	-	16	3.62	.719	Adequate
5	Problems of political socialization	14	2	-	-	16	3.88	.342	Adequate
6	The role of social studies in socialization	8	3	5	-	16	3.19	.911	Adequate
7	Citizenship acquisition in Nigeria	9	4	1	2	16	3.25	1.065	Adequate

8	Fundamental human rights	7	8	1	16	2.38	.619	Not Adequate
9	Types of Civic Responsibilities	2	10	-	16	2.63	.885	Adequate
10	Renunciation and denial of citizenship	9	1	6	16	2.19	.981	Not Adequate

Highly adequate (HA), Adequate (A), Fairly Adequate (FA), Not Adequate (NA)

Table 2 shows the result of the analysis on the adequacy of lesson topic coverage of the course by social studies teachers in colleges of Education in North East Nigeria. From the result, items 1, 2, 3, 4, 5, 6, 7, 9, and 10 have mean scores (\overline{X} = 3.56, 3.44, 3.56, 3.62, 3.88, 3.19, 3.25 & 3.26) above the criterion mean of 2.50. indicating that 80% of the topics were adequately covered by social studies teachers in colleges of Education in North East Nigeria.

Research Question Three: What is the relationship between social studies teachers' lesson presentation and students' performance?

Table 3. Relationship between Social Studies Teachers' Lesson Presentation and Students'

Variable	N	Mean	Standard Deviation	r
Lesson Presentation	16	49.31	3.93	
				.592
Students performance	351	62.13	10.92	

Table 3 shows the relationship between social studies teachers' lesson presentation and students' performance in colleges of Education in northeast Nigeria. The result reveals that the mean score for teachers' lesson presentation was 49.31 and a standard deviation of 3.93, while students' performance had a mean score of 62.13 and a standard deviation of 10.92. The result showed that r = .592, indicating a strong positive relationship between the two variables.

4.1 Discussion

This study examined the relationship between Social Studies teachers' instructional practices and Social Studies students' performance in colleges of Education in the North of Nigeria. The findings on the teaching methods used by social studies teachers' revealed that lecture, discussion, and questioning teaching methods are used mainly by teachers in social studies. The inquiry method, problem-solving method, simulation method, dramatization, construction method, presentation, and concept mapping are teaching methods rarely used by teachers in social studies. Accordingly, the hypothesis test examined the significant relationship between Social Studies teachers' teaching methods and student performance. The findings revealed that the relationship between the teaching methods adopted by social studies teachers and students' performance is statistically significant. This is in agreement with Okam (2012) and Mezieobi (2013), who have written that the teaching methods employed by social studies teachers greatly determine students' understanding and performance in social studies in colleges of Education in

North Nigeria. The implication of these findings is that teachers of social studies in colleges of Education in the North East use different methods in teaching social studies, and the teaching methods used by these teachers significantly affect students' performance in social studies.

V. Conclusion

The study concluded that teachers' teaching methods in social studies influence students' performance in social studies in colleges of Education in northeast Nigeria. Bamidele (2017) corroborates this view when he writes that the teaching method employed by teachers is critical to the teaching-learning process and realizing of lesson objectives, which in turn reflects in students' academic performance. The researcher also observed a significant relationship between the type of instructional materials social studies teachers use and students' performance.

Recommendations

The following recommendations, among others, were put forward by the study

- 1. It is recommended that only teachers with academic and professional qualifications in Social Studies (i.e., B.Sc. or B.Ed. social studies, M.Ed. social studies, or PhD social studies education) should be allowed to teach social studies at the Colleges of Education.
- 2. The colleges should be interested in the types of techniques and strategies used by the teachers, as this can greatly influence students' performance in Social Studies.
- 3. The government should improve the education budget for colleges in North East Nigeria to provide adequate funding and the necessary facilities and equipment for effective teaching.

References

- Babatunde, A. D. (2012). The relevance of information and communication technologies to Social Studies education curriculum in Nigeria. *Nigerian Journal of Social Studies*, 15(2), 133-145.
- Balyejusa, P. N. (2019). The nature and scope of Social Studies. In the concept and scope of Social Studies Education for Schools and Colleges. Lagos: NERC.
- Eze, A. U., & Mezieobi, D. (2018). Repositioning social studies Education for national development in the economically distressed nation. *International Journal of Education*, 2(1), 126-133.
- Ezegbe, B. N., Eskay, M., Anyanwu, J. & Abiogu, G. C. (2014). Role of Social Studies Education in Citizenship Training: Implication for National Development. *International Journal of Scientific Research* 3(8), 54-58.
- Jimoh, A.S. (2012). The capability of social studies to provide curriculum solutions to contemporary social problems: Stakeholders views. *Humanity and Social Science Journal*, 7(1), 58–66.
- Ker, H. W., Lee, Y. H., & Ho, S. M. (2023). The impact of home resources, students' attitudes toward learning, and instructional strategies on science achievement. *Science Education*, 107(6), 1383–1398.

- Mezieobi, K. N. (2016). SOSAN and the development of Social Studies Education in Nigeria. *Nigerian Journal of Social Studies*, I(1), 5 20.
- Obiagu, A., Onwuzurike, U., Agbo, C., & Mezieobi, D. (2022). Social Studies Teachers' Awareness and Practice of. *Enugu State*, *Nigeria (April 2022)*. *Nigerian Journal of Social Studies*, 25(1), 28-52.
- Ojedokun, O. E. (2018). Secondary school Social Studies students' knowledge and attitude to HIV/AIDS: The interaction effects of Gender and Socioeconomic background in Ibadan. *Journal of Arts and Social Sciences*, 101-121.
- Okam, C. C. & Mamkvis, M. (2014). *Problems in exploring social studies Education as an innovative curriculum design in Nigerian schools for sustainable educational development*. Paper presented at the JOVTED 2nd National conference held at Colleges of Education, Hong: Adamawa state.
- Oti, G. O., Ariya, A. D., & Salau, H. U. (2020). Effects of Formative Assessment Strategy on Post Basic Students Attitude and Achievement in Social Studies in Katsina Metropolis, Nigeria. *KIU Journal of Social Sciences*, 5(4), 365-376.
- Shulman, L. S. (2013). Those who understand: Knowledge growth in teaching. *Journal of Education*, 193(3), 1-11
- Tigelaar, D. E., & Beijaard, D. (2013). Formative assessment and teacher professional learning. *Teachers and Teaching*, 19(2), 109-114.
- Walberg, H. J., Fraser, B. J., & Welch, W. W. (1998). A test of a model of educational productivity among senior high school students. *Journal of Educational Research*, 7(9), 133-139.