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EFFECTS OF ROLE-PLAY AND GUIDED-INQUIRY STRATEGIES ON THE PERFORMANCE OF UPPER BASIC SOCIAL STUDIES STUDENTS

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Abstract

This paper examined the effects of Guided Inquiry and Role-play strategies on the performance of upper basic students in Social Studies in Oyo State, Nigeria. The manifestation of social ills among the youths and the fluctuation in the performance of students in Social Studies at the secondary schools necessitated the need to find out about the effectiveness of these two strategies. As a quasi-experimental study, one hundred and forty-seven (147) in-tact JSS 3 students from three schools formed the sample and forty adopted standardized Basic Education Certificate Examination questions and lesson plan to suit Guided Inquiry and Role-play strategies were used as instrument. The study employed a factorial design of 3x2x3 and data were analyzed using (\bar{x}), SD and ANCOVA at 0.05 level of significance. The result indicated that there is significance difference in the performance of students that were taught with Guided-Inquiry and Role-play strategies. It was recommended that Guided Inquiry and Role-Play should be used to teach Social Studies as they both yielded better performance than the expository strategy where students were passive in Social Studies lesson at the upper basic schools in Oyo state, Nigeria.

Keywords: Guided inquiry strategy, Role-play strategy, Social Studies, Social ills

Introduction

Social Studies as a social science subject systematically studies humans and their relationship with the world. It is an issue-focused interdisciplinary subject that draws its content from History, Geography, Economics, Political Science and other social sciences. Therefore, the total development of the learners concerning the entire environments such as physical, social, economic, political is enabled. The primary goal of Social Studies is to create awareness, encourage active interaction with the situations, promotes the total way of life through the production of a functional and productive citizens who would be problem solvers and not problem originators in the society and the world at large. Okunloye (2013) declared that the subject-matter of Social Studies is to imbue in people active citizenship, better relationship as well as critical thinking.

It is true that “the catalytic role that the school curriculum plays is to actualize the interest of the society through the means of its people” (Okunloye & Ogunlade, 2018, p.12-14). In its declaration, FRN (2014) pointed out that different subjects at all levels of Nigeria education are the course contents of our school curriculum. Teachers remain indispensable human resources in a school system; they are to implement government policies concerning education. Adedoyin in Warrah et al. (2020) stated that the teaching involves a lot of activities from preparation for the lesson taken into consideration different strategies with consideration to the needs of the different categories of students to context as well as the instructional materials required to achieve the objectives of the lesson.

Invariably, to achieve the aims and objectives of any subject, applying appropriate instructional methods remains essential coupled with classroom application as feedback on the extent to which learning has taken place as well as the achievement of the aims and objectives of the lesson. In short, Wood and Gentile (2013) commented that teachers realize that there are more effective strategies than conventional methods. Also, it was reported by Lindsey (2018) that students’ performances are greatly enhanced to 62% with Guided Inquiry strategy with questions on Native American culture at the post-test, whereas, only 43% was recorded against the initial pre-test in Social Studies. Positive attitude towards learning could be inspired through the application of role-playing strategy with the use of

educational videos. Attention is no more focused only on the teacher who is seen as "the master of knowledge" with the conventional/expository methods of teaching (Antonio-Jose, Carmen, Gerardo & Magdalena, 2020).

Different innovations and modifications to replace the conventional teaching methods with modern ones have been developed, especially among the developed countries of the world, to avoid memorization of information. Even, the legendary saying by (Franklin 2021, p.1) "tell me, I forget, teach me and I may remember, involve me and I learn" signifies the values of engaging the students in a task as a more meaningful way to learn. Aside inquiry, role-play is another method which allows students active involvement and engagement. Krebt (2017) defined Role-Play as a method which makes the learners illustrate the different social roles as similar to real-life situations. Role-play is a method in which students adopt different roles, play the roles to imitate the how they were performed in the society (Antonio-Jose, Carmen, Gerardo & Magdalena, 2020).

However, reports show that there has been fluctuation in the students' performance in Basic Education Certificate Examination (BECE) in Social Studies at the JSS 3 for the period between 2012 and 2020 across the junior secondary schools in Oyo state. Table 1 and Figure 1 show the trend of students' performance in Social Studies at Basic Education Examination Certificate (B.E.C.E) Organized by the Oyo State Ministry of Education. These trends of fluctuations in performances with concentration of range of passes under grade levels P-F ranging from 11.9% - 48.6% showed that the students have not attained mastery learning in Social Studies. This is grossly unacceptable for a core curriculum which Social Studies is and on which the Nigerian society place high premium for internalization and cultivation of the virtues of good Nigerian citizenship.

Table 1: Trends of Students’ Performance in Social Studies at Basic Education Examination Certificate (B.E.C.E) Organized by the Oyo State Ministry of Education between 2012 and 2020

Year	No of Students that sat for the exam.	No of Students with A-C	% of students with A-C	No of Students with (P-F)	% of students with (P-F)
2013	89,033	53,683	60.3	35,350	39.7
2014	78,303	45,937	58.8	32,266	41.2
2015	88,707	75,703	85.3	13,004	14.7
2016	95,419	84,056	88.1	11,363	11.9
2016	95,531	76,107	79.7	19,424	20.3
2017	98,601	52,137	52.8	48,464	47.1
2018	99,502	59,504	59.6	40,199	40.4
2019	98,867	65,981	66.7	32,886	33.3
2020	99,204	50,963	51.4	48,241	48.6

Source: Ministry of Education, Oyo State

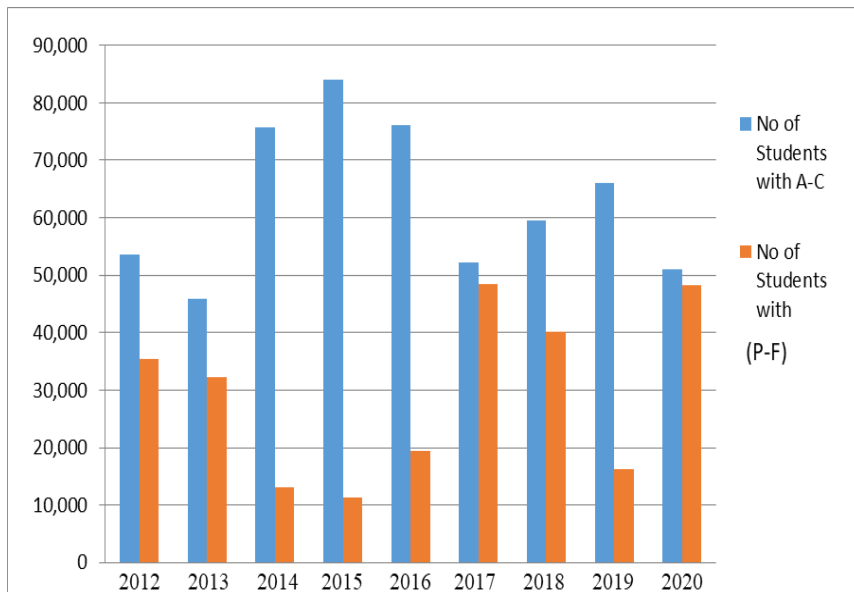


Figure 1: Bar Graph Showing the of Students’ Performance in Social Studies in Oyo State (BECE 2012-2020).

The percentages of students who had below Credit (those with Passes and Failures) are as follows; 39.7%, 41.2%, 14.6%, 11.9%, 20.3%, 47.1%, 40.4%, 33.3% and 48.6% respectively. However, educational stakeholders in Nigeria are concerned with constantly improving students' academic performance in all the domains of learning.

Statement of the Problem

The fluctuating trends of upper basic students' performance in Social Studies, as well as the growth of social vices, have become a source of worry to relevant stakeholders. Data obtained from the Oyo State Ministry of Education (2021) on the performance of students at the BECE between 2012-2020, revealed that 39.7%, 41.2%, 14.7% 11.9%, 20.3%, 47.1% and 40.4% respectively were the percentages of students that had less than credit (C). It has been discovered that students at the public secondary schools have been performing poorly in Social Studies by scoring below credit in some part of the country (Gerald, Augustine & Lucy, 2013). Omokaadejo (2015) reported that teaching across the different levels of education in Nigeria resembles how an army officer gives an order to his subordinates. Hence, this study therefore investigated the efficacy of the Guided Inquiry and Role-Play strategies on the performance of students in Social Studies at the upper basic schools in Oyo State, Nigeria.

Purpose of the Study

The general purpose of the study was to establish the effects of Guided Inquiry and Role-Play strategies on students' performance in Social Studies at the upper basic schools in Oyo State, Nigeria. Specifically, the study examined;

1. Effects of Guided Inquiry and Role-Play strategies on the students' performances in Social Studies at the upper basic schools in Oyo State, Nigeria;
2. Interaction effect of students' age on the students' performance in Social Studies when taught using the Guided Inquiry and Role-Play strategies at the upper basic schools in Oyo State, Nigeria; and
3. Interaction effect of students' gender on the students' performance in Social Studies when taught using the Guided

Inquiry and Role-Play strategies at the upper basic schools in Oyo State, Nigeria.

Research Questions

Based on the general purpose stated, the following research questions were raised:

1. What are the effects of Guided Inquiry and Role-Play strategies on the students' performance in Social Studies at the upper basic schools in Oyo state, Nigeria?
2. What is the interaction effect of students' age on the students' performance in Social Studies when taught using the Guided Inquiry and Role-Play strategies at the upper basic schools in Oyo state, Nigeria?
3. What is the interaction effect of gender on the students' performance in Social Studies when taught using the Guided and Role-Play strategies at the upper basic schools in Oyo State, Nigeria?

Research Hypotheses

The following research hypotheses were tested in the study;

H₀₁: There are no significant effects of Guided Inquiry and Role-Play strategies on the students' performance in Social Studies at the upper basic schools in Oyo state, Nigeria.

H₀₂: There is no significant interaction effect of students' age on the performance in Social Studies when taught using the Guided Inquiry and Role-Play strategies at the upper basic schools in Oyo State, Nigeria.

H₀₃: There is no significant interaction effect of gender on the students' performance in Social Studies when taught using the Guided Inquiry and Role-Play strategies at the upper basic schools in Oyo State, Nigeria.

Scope of the Study

This study examined the effects of Guided Inquiry and Role-Play strategies on students' performance in Social Studies; the study

covered all the Social Studies teachers and students at the upper basic schools across the 33 local governments in Oyo State, Nigeria. The sample comprised of the Junior Secondary School 3 (JSS) students. The class was considered appropriate because students in this class were readily available for the research activities as they were preparing to take the Basic Education Certificate Examination. The variables considered in this study were Guided Inquiry, Role-play as well as Performance. Also, the moderating variables were students' age and gender. Research questions were answered using descriptive statistics and hypotheses tested using ANCOVA.

Literature Review

Literature was reviewed with consideration to the following;

Meaning, Nature, Objectives and Evolution of Social Studies in Nigeria

Social Studies has various definitions and therefore has no generally accepted definition like other social sciences. Adedigba and Wahab (2015) simply put that Social Studies is to teach students how to appreciate the differences and mutuality of all members of the country. The Nigerian society is no doubt, a society with diverse culture and the need to appreciate and promote cultural heritage is essential. Also, Lindsey (2018) acknowledged that Social Studies lends itself beautifully for student inquiry and creating a room that promotes education for change and that so much of what the students experienced has happened before and allowing them to become thinkers and problem solver may hold the answer to a more democratic society in the future. Osakwe (2010) added that there is the need to adjust and update the Social Studies curriculum in order to address the different issues, challenges, events and changes. Mezieobi (2013) summarized that Social Studies would not succeed if it does not include innovations that will enhance the production of responsible citizens. Social Studies, whenever possible, must start with a topic that will spark student's interest and provides issues or problems that has a consequence to society (Jorgensen, 2014). In other words, Jekayinfa (2017) clarified that Social Studies goes beyond the inculcation of moral values in the learners to incorporation of skills to make the society a better place for all. As inferred from the different definitions, Social Studies enable active citizenship in the society.

Inquiry Method in Teaching and Learning

The inquiry is not a new strategy for the teaching and learning of the different subjects in schools. Series of efforts led to the introduction of theories and models in order to encourage active students' participation through critical thinking instead of memorizing the information offered by the teacher. Firstly, rapid change and development at the United States of America in the 19th century contributed to the urgent needs for Progressive educational reforms. Bohan (2003) also reported that progressive movement that was highly important as a response by the democratic reform movement to the problems and paradoxes evident in the Gilded Age.

The need to aid the critical thinking of the learners gave room for the emergence of inquiry pedagogy. "Inquiry-based teaching transforms the aims of school from short-term memorization of facts into disciplined questioning and investigating" (Wolk, 2008, p.117). Dewey believed that the experience is essential in learning and that memorization should be discouraged in order to aid active learning so that the foundation for critical thinking as well as performance could be laid right from the classroom. How does the learner think? According to Dewey (1933 in Jing, 2007, p.106), reflective thinking is linked to the following five steps/procedures:

- i. Experiencing a perplexed, troubled, uncompleted or confusing situation;
- ii. Constructing a tentative interpretation for a possible solution to the given situation;
- iii. Defining and clarifying the problem by careful examination and analysis of its conditions;
- iv. Transforming conjectures into hypotheses through action; and
- v. Experiencing a post-reflective phase with a resolved situation.

Different policies, theories and models have been formulated in order to improve teaching and learning and to support the inquiry method not only in the United States of America but in other parts of the world. As a result, efforts have been made to improve the traditional teaching methods with modern methods that could make students to be actively involved in lessons to enhance knowledge creation and not memorization of knowledge. Bimbola (2010) simply defined conventional method as an oral method of teaching mainly from the

teacher to the students. Whereas, the vision for education that develops competencies through a process of inquiry and discovery for fostering intellectual engagement, an entrepreneurial spirit, and the disposition of ethical citizenships should be given priority. Students would collaborate to create new knowledge while also learning how to “think critically and creatively, and how to make discoveries – through inquiry, reflection, exploration, experimentation and trial and error” (Alberta Education, 2010, p.19).

Role-Play and Guided Inquiry Strategies, Tools/Instructional Materials

Teaching is a vehicle for education with teachers being the driver and the students being the passengers. How the driver drives determine the passengers' safety, when and how they arrive at their academic destinations. Teaching encompasses teacher's values, attitudes, beliefs and intentions (Iloabuchi, 2017). Though, evidence abound suggests that teachers in Nigeria are yet to cue into the child centered methods (Abanikanda, 2011 and Nwokeocha, 2013). The impacts of the two parties; the teacher and learners cannot be ignored in teaching and learning as they both have link to the achievement of the objectives of lessons. Therefore, the interaction and participation of both the teacher and the learner becomes important. The essence of any meaningful strategy applies in teaching is to bring about learning. Teaching and learning should not be a wasteful venture for both the teacher and the learners; it is to achieve specific aims and objectives. Hence, the need to find a means that would overcome this fear and develop learners' confidence to the use of language in a fun and motivating ways (Toledo, 2016).

Role-play is not new entirely but using role-play as a method requires the guidance of a teacher who guides towards the attainment of the objectives of the lesson and not just for the fun of it. The use of role-play activities develops communication skills and students are encouraged to master through conversational activities (Afdillah, 2015). Role play as an approach in facilitating learning proves to be effective in reaching learning outcomes in three major learning domains: affective, cognitive and behavioral (Shangeetha 2017). Hence, with the need to embrace role play as a strategy of teaching becomes paramount. Role play is an educational method in which participants assume certain

role, act out and improvise that role (Antonio-Jose, Carmen, Gerardo & Magdalena 2020).

Furthermore, Saka-Alikinla, Owodunni and Babatunde (2016) added that guided inquiry equips learners with competencies and abilities to tackle the challenges of the world. There are certain procedures to be followed by the teacher in order to implement guide inquiry strategy; the teacher is to systematically follow certain steps in order to make teaching a meaningful venture that is not just to waste the efforts of both the teacher and the learner. The 5-E Model of Inquiry systematically highlights the following procedures/phases: engagement, exploration, explanation, elaboration and evaluation (Warner & Myer, 2008). With these five procedures, the learners should be active in class and even in society. However, for teachers to make instructional shifts from the traditional method to embrace the child-centered methods like inquiry and role-play, the need for a variety of problem unraveling instructional aids is needful. Edinyand and Effiom (2017) simply noted that Social Studies instructional materials and resources in critical perception seem to portray those educational relevant and irrelevant humans, non-human materials, places and events and experiences that the learners have access to during teaching-learning situation and interaction with the larger society.

There are many other tools/ Instructional aids that could be used by the teacher depending on the topic, creative ability of the teacher and the relevance of things around the environment because Social Studies covers the study of humans and the environment. These tools could be audio, audio-visual, visual, prints and a host of other real objects that could be relevant to the topic. Alberta Education (2010) stated that students “construct meaning in the context of their lived experience through active inquiry and engagement with their school and community” (pg.5). With the advancement in technology, different instructional materials can be applied in or outside the classroom to aid teaching and learning, most notably for Social Studies that this study focuses. Teachers and teacher educators can no longer credibly do their jobs without becoming leaders in the use of technology, especially, as the world is driven by these complex set of digital devices and telecommunication network, coupled with the fact that learners are even more fluent with the use of these tools (Nwokeocha, 2013). However, Grant, Lee, & Swan, (2014) noted that the Inquiry Designed

Model (IDM) is an example of a hard scaffold that could be provided to support the teachers in their inquiry planning. The Inquiry Design Model (IDM) is a distinctive approach to creating instructional materials or aids that honor teacher's knowledge and expertise; avoid over-prescription, and focuses on the central elements of the instructional design process as envisioned for Social Studies Standards (National Council for Social Studies, 2013). Simply, the IDM is the blueprint, a one-page representation of the question that defines the inquiry technique.

Influence of Students' Gender and Age on the Academic Performances in Social Studies

The students represent a significant figure in any school setting, as important as the teachers are, the students too cannot be disregarded as figures and important factors for the success of teaching and learning as well as the implementation of any educational policies. Different researches have accounted for the different factors for influencing the performance of the students in Social Studies at the upper basic schools ranging from gender, age, school location, family type, economic status of the parents among others. Different researchers have reported that the Nigerian society is known as a gender-biased society with the belief that males are better than females. Gender is the properties that distinguish the organism based on their reproductive roles as female or male (Abubakar & Uboh, 2010). Studies are fast disrupting the notion that male perform better than female (Abubakar, 2010; Eniayeju, 2010). Many studies have shown that girls perform better in school than boys in the major subjects and that they graduate from high school with higher grade point averages (GPAs) than their male peers (Perkins, Kleiners, Roey & Brown, 2004).

Also, students' age was identified by other researchers as a contributing variable to students' performance. There is variation in the outcomes of the studies. Momanyi, Too and Simiyu (2015) investigated the effect of age on the student's academic performance among the high school students in the teacher-made test in Kenya. From the findings, age had a significant effect on the students' academic performance. The study also established that students' age had no significant effect on academic motivation. This outcome was inconsistent with a study conducted in Nigeria by Ebebuwa-Okoh,

(2010) in which boys in certain ages (9, 13 &17) showed higher achievement than those in other ages. Though the researchers want to find out the influence of students' gender and age on the performance of the students in Social Studies at the upper basic schools in Oyo state.

Methodology

The research employed quasi-experimental research design of the type pre-test, post-test, non-randomized and non-equivalent control group with a factorial design of 3x2x3. The first three factorial levels were involved, two experimental groups (the guided inquiry and role-play treatment) and one control group (the conventional method). The second factorial level is gender occurring in either male (M) or Female (F). The third factorial level is age occurring within the ranges of 10-12, 13-15 and 16years and above. All the three groups received the pre-tests and post-tests before and after the treatment, respectively.

Population, Sample and Sampling Technique

The population of this study consisted of all sixty-nine thousand five hundred and thirty (69, 530) JSS 3 students and six hundred and twenty-seven (627). Social Studies teachers in five hundred and sixty-nine (567) public secondary schools in Oyo state as at 2019. With cluster sampling the schools were considered based on local governments. With random sampling, three local governments were considered and one school each was picked from the three randomly selected local governments for this study. One hundred and forty-seven (147) in-tact classes of the JSS3 students from the selected schools were used as the sample for this study.

Instrumentation

The instrument used for this study was adopted standardized Basic Education Certificate Examination questions organized by the National Examination Council, Nigeria. The forty (40) selected questions from past questions between years 2012-2016 were used for the pre-test and the same questions were reshuffled for the post-test. Each of the forty questions carries 2 1/2 marks each, altogether the test is 100 marks, lesson plans treatment packages to suit Guided Inquiry, Role-Play strategies and the conventional/expository method for four topics from the JSS 3 (RVNE) curriculum were developed. The researchers

checked the instrument to ascertain their correctness, appropriateness and relevance to the variables under investigation. The reliability of the instrument was determined using test re-test method using the Pearson Product Moment Correlation Coefficient. The reliability coefficient obtained was 0.78.

Data Analysis Techniques

The demographic data of the respondents were analyzed using percentage. The results obtained from the pre-test and post-test were analyzed with Analysis of Covariance ANCOVA using the Statistical Package for Social Science (SPSS) 23.0 version and the hypotheses were tested at 0.05 alpha level.

Demographic Information of Participants

This section presents the demographic information of participants (Upper Basic Social Studies students) using descriptive statistics of percentages resulting from the frequency counts of the participants. Results are shown in Table 4.

Table 3: Demographic Information of Study Participants

Categories	Characteristics	Frequency	Percent
Gender	Male	81	55.1
	Female	66	44.9
	Total	147	100.0
Age	10-12	8	5.4
	13-15	119	81.0
	16 and above	20	13.6
	Total	147	100.0
Groups	Control	62	42.2
	Guided Inquiry	43	29.3
	Role-play	42	28.6
	Total	147	100.0

As shown in Table 3, 81(55.1%) of the respondents were males, while 66(44.9%) were females, 8 (5.4%) were aged between 10-12 years, 119(81.0%) were aged between 13-15 years while 20(13.6%) of the respondents were 16 years and above. Also, 62(42.2%) of the students

were in the Control Group, 43 (29.3%) were in the Experimental Group 1 exposed to the treatment on Guided Inquiry while 42 (28.6%) students were in the Experimental Group 2 exposed to the treatment on Role-play.

Answering Research Questions

Research Question One: *What are the effects of Guided Inquiry and Role-play strategies on students' performance in Upper Basic Social Studies at the upper basic schools in Oyo State, Nigeria?*

Also, student's post-test scores were computed to answer research question three as well. The test was graded over 100, a mean score of 50% and above was indicative of above-average performance using descriptive statistics of mean and standard deviation, as shown in Table 4.

Table 4: *Mean and Standard Deviation of Students' Academic Performance in Upper Basic Social Studies with guided inquiry and role-play strategies*

Groups	N	Minimum	Maximum	Mean	Std. Deviation
Control	62	13	88	43.63	19.570
Guided Inquiry	43	16	91	51.89	20.119
Role-play	42	35	94	67.98	15.551

As shown in Table 4, the mean academic performance of students in Upper Basic Social Studies in the control group had a mean of 43.63 with a standard deviation of 19.570; participants instructed using Guided Inquiry had a mean of 51.89 with a standard deviation of 20.119 while participants instructed using Role-Play had a mean of 67.98 with a standard deviation of 15.551. This result shows that the academic performance of students' in control was below average while the academic performances of students in the experimental groups (Guided Inquiry and Role-Play) were above average. The result implies that both (Guided Inquiry and Role-play strategies) have significant effects on the performance of the learners in Upper Basic Social Studies in Oyo state.

Though students in the experimental group two (Role-Play) had the best result.

Research Question two: *What is the interaction effect of students' age on students' performance when taught using the Guided Inquiry and Role-play strategies at the upper basic schools in Oyo State, Nigeria?*

Also, student's pre-test and post-test scores were computed to answer research question four as well. The test was graded over 100 with a descriptive statistic of ANCOVA, as shown in Table 5.

Table 5: ANCOVA Summary table on interaction effect of age and treatments (Guided Inquiry and Role-play) on students' academic performance in Upper Basic Social Studies

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Decision
Corrected Model	30216.436 ^a	9	3357.382	13.149	.000	
Intercept	13937.356	1	13937.356	54.587	.000	
PRETEST	9560.729	1	9560.729	37.445	.000	
GROUPS	3925.398	2	1962.699	7.687	.001	
GROUPS * AGE	1785.794	4	446.449	1.749	.143	NS
Error	34979.376	137	255.324			
Total	478145.313	147				
Corrected Total	65195.812	146				

Table 5 shows that F calculated value (1.749) significant at 0.05 alpha level. Since the P-value 0.14 is greater than 0.05 alpha level (0.14 > 0.05). This result implies that students' age had no significant interaction effect on students' performance even with the treatments (Guided Inquiry and Role-play) at the Upper Basic Social Studies in Oyo State.

Research Question three: *What is the interaction effect of students' gender on students' performance when taught using the Guided Inquiry and Role-play strategies at the upper basic schools in Oyo State, Nigeria?*

The student's post-test scores were computed to answer research question five and the test was graded over 100 with a descriptive statistic of ANCOVA, as shown in Table 6.

Table 6: *ANCOVA Summary table on the interaction effect of gender and treatments on students' academic performance in Upper Basic Social Studies*

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Decision
Corrected Model	27500.650 ^a	6	4583.442	17.023	.000	
Intercept	13919.196	1	13919.196	51.696	.000	
PRETEST	11920.129	1	11920.129	44.271	.000	
GROUPS * GENDER	95.851	2	47.925	.178	.837	NS
Error	37695.162	140	269.251			
Total	478145.313	147				
Corrected Total	65195.812	146				

Table 6 shows that F calculated value (0.178) significant at 0.05 alpha level. With the P-value 0.84 which is greater than 0.05 alpha level (0.84 > 0.05). This result implies that gender had no interaction effect on students' performance with treatments (Guided Inquiry and Role-play) on students' academic performance in Upper Basic Social Studies in Oyo state.

Test of Hypothesis

Hypothesis One: *There is no significant effect of guided inquiry strategy on the students' performance in Social Studies at the upper basic schools in Oyo State, Nigeria.*

Students' pre-test and post-test scores in Upper Basic Social Studies for the experimental group I (Guided Inquiry) and control group were analyzed using one-way ANCOVA at 0.05 level of significance, and the results are shown in Table 7.

Table 7: ANCOVA Summary table on Effect of Guided Inquiry on students' academic performance in Upper Basic Social Studies

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Decision
Corrected Model	14030.329 ^a	2	7015.165	25.496	.000	
Intercept	7415.136	1	7415.136	26.950	.000	
PRETEST	12297.787	1	12297.787	44.695	.000	
GROUPS	1504.047	1	1504.047	5.466	.021	S
Error	28064.969	102	275.147			
Total	274157.813	105				
Corrected Total	42095.298	104				

Table 7 shows that F calculated value (1, 5.47) significant at 0.05 alpha level. The null hypothesis one is rejected since the P-value 0.02 is less than 0.05 alpha level ($0.02 < 0.05$). This decision implies that the Guided Inquiry strategy has significant effect on students' academic performance in Upper Basic Social Studies. The means and standard deviation for groups are shown in Table 8.

Hypothesis One: *There are no significant effects of Guided Inquiry and Role-Play strategies on the students' performance in Social Studies at the upper basic schools in Oyo State, Nigeria.*

Students' pre-test and post-test scores in Upper Basic Social Studies for both experimental groups I and II (Guided Inquiry and Role-play) as well

as the control group were analyzed using one-way ANCOVA at 0.05 level of significance, and the results are shown in Table 8.

Table 8: ANCOVA Summary table on Effects of Guided Inquiry and Role-Play strategies on students' academic performance in Upper Basic Social Studies

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Decision
Corrected Model	27100.731 ^a	3	9033.577	33.910	.000	
Intercept	15964.344	1	15964.344	59.926	.000	
PRETEST	12183.150	1	12183.150	45.733	.000	
GROUPS	5517.508	2	2758.754	10.356	.000	S
Error	38095.081	143	266.399			
Total	478145.313	147				
Corrected Total	65195.812	146				

Table 8 shows that F calculated value (2, 10.356) significant at 0.05 alpha level. The null hypothesis three is rejected since the P-value 0.00 is less than 0.05 alpha level ($0.00 < 0.05$). This decision implies that treatments (Guided Inquiry and Role-play strategies) had significant effects on students' academic performance in Upper Basic Social Studies. A follow up posthoc test (Duncan) was carried out to find the sources of the difference, as shown in Table 9.

Table 9: Duncan's Posthoc table on the source of significant difference with Control, Guided Inquiry and Role-play strategies

GROUPS	N	Subset for alpha = 0.05		
		1	2	3
Control	62	43.63		
Guided Inquiry	43		51.89	
Role-play	42			67.98
Sig.		1.000	1.000	1.000

a. Uses Harmonic Mean Sample Size = 47.473.

b. The group sizes are unequal. The harmonic mean of the group sizes was used.

As shown in Table 9, students in Role-play group in subset 3 had the highest mean value of 67.98, followed by students in Guided Inquiry group in subset two who had a mean score of 51.89 while students in the control group in subset 1 with a mean of 43.63. This result connotes that students in experimental group 2 exposed with Role-play strategy were the group that brought about the significance and as such, the most effective method for teaching Upper Basic Social Studies.

Hypothesis two: *There is no significant interaction effect of students' age on the students' performance in Social Studies when taught using the guided inquiry and Role-Play strategies at the upper basic schools in Oyo State, Nigeria.*

Students' pre-test and post-test scores in Upper Basic Social Studies for both experimental groups I and II (Guided Inquiry and Role-play) and the control group, as well as data on students' age, were analyzed using two-way ANCOVA at 0.05 level of significance and the results are shown in Table 10.

Table 10: ANCOVA Summary table on interaction effect of age and treatments (Guided Inquiry and Role-play) on students' academic performance in Upper Basic Social Studies

Source	Type III	Df	Mean	F	Sig.	Decision
	Sum of Squares					
Corrected Model	30216.436 ^a	9	3357.382	13.149	.000	
Intercept	13937.356	1	13937.356	54.587	.000	
PRETEST	9560.729	1	9560.729	37.445	.000	
GROUPS	3925.398	2	1962.699	7.687	.001	
GROUPS * AGE	1785.794	4	446.449	1.749	.143	NS
Error	34979.376	137	255.324			
Total	478145.313	147				
Corrected Total	65195.812	146				

Table 10 shows that F calculated value (4, 1.749) significant at 0.05 alpha level. The null hypothesis four is not rejected since the P-value 0.14 is greater than 0.05 alpha level ($0.14 > 0.05$). This result implies that there is no significant interaction effect of students' age and treatments (Guided Inquiry and Role-play) on students' academic performance in Upper Basic Social Studies.

Hypothesis three: *There is no significant interaction effect of students' gender on the students' performance in Social Studies when taught using the guided inquiry and role-play teaching strategies at the upper basic schools in Oyo State, Nigeria.*

Students pre-test and post-test scores in Upper Basic Social Studies for both experimental groups I and II (Guided Inquiry and Role-play) and the control group, as well as data on students' gender, were analyzed using two-way ANCOVA at 0.05 level of significance, and the results are shown in Table 11.

Table 11: ANCOVA Summary table on the interaction effect of gender and treatments on students' academic performance in Upper Basic Social Studies

Source	Type III	Df	Mean	F	Sig.	Decision
	Sum of Squares		Square			
Corrected Model	27500.650 ^a	6	4583.442	17.023	.000	
Intercept	13919.196	1	13919.196	51.696	.000	
PRETEST	11920.129	1	11920.129	44.271	.000	
GROUPS * GENDER	95.851	2	47.925	.178	.837	NS
Error	37695.162	140	269.251			
Total	478145.313	147				
Corrected Total	65195.812	146				

Table 11 shows that F calculated value (2, 0.178) significant at 0.05 alpha level. The null hypothesis five is not rejected since the P-value

0.84 which is greater than 0.05 alpha level ($0.84 > 0.05$). This result implies that there is no significant interaction effect of students' gender and treatments (Guided Inquiry and Role-play) on students' academic performance in Upper Basic Social Studies in Oyo state.

Conclusion

With the treatment (Guided Inquiry and Role-Play methods) there are significant differences in the performance of upper basic students in Social Studies than with the conventional method. Role-play method scored higher than Guided Inquiry while the control group had the least score. The two learner-centered methods (Guided Inquiry and Role-Play methods) that actively involved critical thinking and active participation of the learners were quite effective for the achievement of the objectives of teaching Social Studies at the Upper Basic Schools. The students' performance is not influenced by students' age and gender as the study considered and assessed these moderating variables in order to find out the interaction effect on how the students perform if teachers employ the learner-centered methods like Guided Inquiry and Role-Play methods.

Recommendations

Social Studies teachers should use the learner-centered methods like Role-Play and Guided Inquiry strategies along with the existing teacher centered methods. Social Studies teachers should not be dogmatic on the use of conventional methods for teaching; teachers themselves should be ready to learn new methods that allow students to be active members / thinkers and not just passive listeners. Learners irrespective of age and gender should be encouraged to be more committed to teaching and learning as the learner-centered methods require students' commitment, active involvement and seriousness. Creation of an enabling environment, classroom climate and siting arrangement that will give room for easy movement and that will allow the students to carry out different activities is a factor for the use of child centered methods like role play and inquiry methods.

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