Effects of Self-Regulated Learning Technique on Academic Achievement of Upper Basic Social Studies Students in Pankshin, Plateau State, Nigeria.

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ARTICLE INFO	ABSTRACT

The aim of the study was to investigate the effects of self-regulated learning technique on the interest and academic achievement of upper basic students in social studies in Pankshin, Plateau State Nigeria. The study employed quasi-experimental research design. Specifically, the non-randomised pre-test post-test control group design, in which intact groups were assigned to the experimental and control groups. The population for this study consists of twenty-three (23) public secondary schools with a total number of one thousand nine hundred and eighty-two (1982). The sample for the study was 120 students in the Upper Basic II level in Pankshin. Lottery method of simple random sampling technique was used in sampling the schools. Two instruments were used for data collection. They are the Social Studies Achievement Tests (SSAT), and Upper Basic II Students Interest in Social Studies Questionnaire (UBSISSQ). The Mean, Standard Deviation and Simple Percentage were used in answering the research questions. Analysis of Covariance (ANCOVA) and (MANOVA) were employed in testing the hypotheses at 0.05 level of significance. The findings revealed that the post-test mean scores of the experimental group of ($\bar{x}$ = 64.12, SD =13.80) is higher than the pre-test mean score ($\bar{x}$= 39.01, SD =8.93) with a mean gain of 25.11, indicating that there was improvement in the achievement of students after treatment. The results of interest mean scores of the experimental and control groups before and after exposure to self-regulated learning in Social Studies in Pankshin, for experimental group shows that the post-test interest mean score was higher than the pretest. The study recommends that Government should be proper care-giving support to learners on the area of their interest. Students' motivation should be adequate to enhance the level of skills in them.

INTRODUCTION

The philosophy of Nigeria education as stated by the Federal Republic of Nigeria (FRN) (2014) is based on the development of the individual into a sound and effective citizen and the provision of equal opportunities for all citizens of the nation at all levels both inside and outside the formal school system. That is why the Federal Republic of Nigeria (FRN, 2014) stipulates that every Nigerian child has a right to education for the purpose of engendering national development, achievable through pre-primary, primary, secondary and tertiary levels of education. For easy achievement of the stated goal, secondary education is segmented into two sections; three years of junior secondary school and three years of senior secondary. The secondary education level occupies an important and critical position in the setup of the educational system as a transitional stage between basic and tertiary education. Ideally, the secondary schools are to carter for the needs of educating and training middle level technicians and skilled workers. This is done by deliberately designing the curriculum to cater for fundamentally lifelong knowledge base programmes. The school system has been trying to achieve this desirable purpose through the various school subjects. But since most school subjects deal with specific areas of knowledge, the all-round or holistic approach to human behaviour especially character formation, value, knowledge and skills for national citizenship seem to be lacking. Hence the introduction of Social Studies into the school curriculum.

Social Studies as a school subject or academic field of study is the study of the aspects connected with all human beings to enable them to live a fulfilled and comfortable life. Though the subject has been defined differently, its curriculum is a potent tool that develops learner's skills for effective citizenship and lifelong education. Thus, Social Studies is commonly seen as a cultural integration where both the material and non-material culture of a people are studied. Kazi, (2017) sees Social Studies as an eclectic distillation of social phenomena for socio-civic living or behaviour in the society. This source further elaborates that Social Studies is both, values-free and values-laden in nature which teachers of the subject must be aware of, to produce effective and prospective citizens for Nigeria. Therefore, Social Study is those portions of the Social Sciences selected for instructional purposes applied to include anything pertinent to the immediate purpose of learning and adapted to the level of comprehension of the student.

Specialists asserts that Social Studies is yet to achieve its objectives of contributing in developing the spirit of patriotism, loyalty, spirit of fair play, justice, national consciousness, preserving the country's national heritage and becoming useful citizens to the nation and the individual person at the junior secondary school, which could be as a result of poor teaching and

or inadequacy of instructional materials, poor selection and use of instructional technique or inadequate motivation of students. The learner is completely left-out in the assessment and evaluation process, yet the learner is the central factor in the teaching-learning process. The success or otherwise of Social Studies teaching learning activities depends to a large extent, on how well the teacher communicates and to what extent the teacher is able to involve the learners in activities during and after instruction. (Offorma, 2014) This is because the desired changes in learning behaviour will not come merely through teacher's instructional activities but also, students' interest. Interest is viewed as attraction which forces or compels one to respond to a particular stimulus. It is therefore the duty of the teacher to identify and use the appropriate learning aid that will make students develop interest in learning, so as to improve student's academic achievement.

Academic achievement of students, both at primary and the junior secondary school level, speak not only of the effectiveness of schools but also a major determinant of the country's educational direction, future development and the medium through which the attainment of individuals and the nation's educational goals can be achieved in learning. One major factor of attraction is the method of teaching and all the strategies and techniques that teachers and students employ for teaching-learning of school subjects including Social Studies. Though many may argue that methods of teaching have been over emphasized, but methods, techniques and strategies that encourages learner self-worth can never be over emphasized. This is to say self-regulated learning may be important in this discussion.

Self-regulated learning refers to the monitoring and controlling of one's own cognitive achievement before, during, and after a learning process. Self-regulated learning could have a wide influence in areas, including subjective well-being, physical health, social achievement, economy, and online education. Gender is another factor that seems to influence pupils' achievement in social studies. Since gender are those range of characteristics distinguishing males and females, particularly in the masculine and feminine attributes assigned to them. Gender has remained a topic of discussion and a source of disagreement among researchers in the educational system. While some studies show evidence of males' superiority over the females in social studies, there are those that show no significant differences in males' and females' achievement in Social Studies. These inconsistencies create and sustains curiosity hence the need to investigate whether learners exposed to self-regulated technique will achieve differently based on gender.

Students' learning location like gender, has generated curiosity among researchers. Some researchers reported that students from urban areas performed better than those from rural secondary

schools. In this light, location has both direct and indirect effects on academic achievement of learners and therefore, the need to investigate whether Social Studies students exposed to self - regulated learning technique will achieve differently based on the location of the school.

Over a considerable volume of time, resources and efforts invested into the educational system, in relation to the corresponding outcome is not quite encouraging as the difference between the "educated" and the "uneducated" seems to be very little, as the behaviours of the "educated" does not discriminate the "uneducated". Digging into performances of the educated simply shows poor achievements in the subjects that possess the potency to build effective, critical thinkers and problem solvers. Since the main purpose of learning in any given society is to effect change in the behaviour of the learners, then, Social Studies should be handled with the sense of responsibility, because as a school subject or academic field of study, it is saddled with the responsibility of developing in the learners the spirit of patriotism, loyalty, spirit of fair play, justice, national heritage and becoming useful citizens to the nation and to the individual person from cradle to dead.

Specialist of Social Studies envisaged that the objectives of the subjects are yet to be achieved. Based on the statistical records of student's academic achievement, the objectives of Social Studies at the junior secondary school level has been dwindling. Recently, there has been increasing interest among researchers in the field of Social Studies on how students can improve their academic achievement in Social Studies. Some studies from foreign nations and few schools in Nigeria suggest that exposing students to self-regulated learning strategy may enhance their achievement and interest in Social studies. But there is no record of whether self-regulated learning technique has been used in secondary education level within the study area, except for Naanvit Star Nursery/Primary School Pankshin that is practicing self-regulated learning method of teaching, and has recorded a considerable level of success demonstrated by the increasing enrolment of pupils, and record of how well their products perform at the secondary levels. The problem is whether the use of self-regulated learning technique will improve students' interest and achievements in Social Studies at the junior secondary school level in Pankshin Local Government Area.

In this respect, it can be argued that the concept of self-regulated learning marks a shift in educational research from considering students' learning capabilities and environments as fixed entities, to focusing on students' learning processes and responses, which are dynamic in nature, and influence their academic success. Hence, factor such as self-regulation should be taken into consideration. The broad question for this study therefore, is, what is the effects of Self-Regulated Learning Technique on Students' Interest and Academic Achievement?

Aim and Objectives of the Study

The aim of the study is to investigate the effects of self-regulated learning technique on the interest and academic achievement of upper basic students in social studies in Pankshin, Plateau State Nigeria. Specifically, the study intends to achieve the following objectives to:

1. determine the pre-test and post-test achievement mean score of the experimental and control group.
2. ascertain the pre-test and post-test interest mean scores of the experimental and control group.
3. determine post-test mean achievement score of male and female students who are exposed to self-regulated learning in Social Studies in Pankshin.

Research Questions

The following research questions guided the study;

1. What is the achievement mean score of the experimental and control group before and after exposure to treatment?
2. What is the interest mean score of the experimental and control group before and after exposure to self-regulated learning in Social Studies in Pankshin.
3. What is the achievement mean score of male and female students after exposure to self-regulated learning in Social Studies in Pankshin?

Hypotheses

The following hypotheses were formulated and tested at alpha 0.05 level of significance.

1. There is no significant difference in the achievement mean scores between the experimental and control group after exposure to self-regulated learning technique
2. There is no significant difference in the interest mean scores between the experimental and control group after exposure to self-regulated learning technique.
3. There is no significant difference in the achievement mean score between male and female social studies students after exposure to self-regulated learning technique.

Concept of Self-Regulation.

Self-regulation means different things to different people. Bell, (2016) asserts that self-regulation has no straightforward definition. Nevertheless, Bell

defines self-regulation as "control (of oneself) by oneself". Someone who has good academic self-regulation has the ability to keep their academic activities in check. They can resist behaviours that might lead to academic backwardness and focus on their targeted aim and objectives. They can cheer themselves up when they're feeling down. They have a flexible range of emotional and behavioural responses that are well matched to the demands of their environment. Chika, Obodo, and Okafor (2015) defined self-regulated learning as the learning that is guided by Meta-cognition (thinking about one's thinking) and strategic action (planning, monitoring and evaluating personal progress against a standard), and motivation to learn. Self-regulated learning (SRL) refers to the process a student engages in when he/she takes responsibility for his/her own learning and applies himself/herself to academic success (Ackerman, 2020). This process happens in three steps: Planning; The student plans his/her task, sets goals, outlines technique to tackle the task, and/or creates a schedule for the task; monitoring, in this stage, the student puts his/her plans into action and closely monitors his/her performance and his/her experience with the methods he/she chose; reflection, Finally, after the task is complete and the results are in, the student reflects on how well he/she did and why he/she performed the way he/she did (Ackerman, 2020).

This means self-regulated learning consists of many techniques, which includes goal setting, self-efficacy, goal orientation, metacognitive monitoring, self-evaluation, self-motivation among others. In order to gain access, monitor, and regulate one's cognitive activities, certain technique such as self-instruction, self-monitoring, among others are necessary. Self-regulation serves as the foundation for lifelong functioning across a wide range of domains, from mental health and emotional wellbeing to academic achievement, physical health, and socioeconomic success.

Concept of Self-Regulated Learning Technique

Teaching and learning technique are the catabolic pool that energizes the inculcation of knowledge and permanent idea learned under the supervision of a teacher. Basically, to achieve better in teaching and learning process, learners are expected to be involved in the teaching and learning process because they are the central processing unit in learning activities. This aim can only be achieved when learners are exposed to the teaching technique that is learner-centered, (Papanthy & Darra, 2019). During self-regulation process, learners express their judgement about the efforts they make, which may be either autogenously and comes from their personal interest, or heterogonous and comes from someone else. Consequently, students should be encouraged to be regular and active participants in their learning through self-regulated learning technique. It is more efficient

than the normal classroom setting that is teacher-oriented and involves teacher-centered teaching. Once an individual acquires the requisite skills of self-regulated learning technique, he or she can continue to use them and study in the teacher's absence using those skills already acquired. This appears to give room for slow and fast learners to work in an environment without each being a clog in the wheel of progress of another.

Effects of Self-Regulated Technique on Students' Academic Achievement

Social Studies learners need to be independent and autonomous as the essence of successful Social Studies learning is self-direction and self-management. This makes Self-Regulated Learning and Social Study to have a lot in common. For instance, the learner's ability to exercise self-control, and an extensive body of literature has shown that aspects such as withstanding temptation, resisting distractions, persevering through long-term goals, delaying gratification – all being part of self-control – vary considerably depending on individual characteristics. (Yan,2018) The fact that all of this is not an easy task has been confirmed by many learners who stated that staying motivated and consistent can be hard to maintain. Not a large number of students are self-regulated to the maximum of their capacities, but those who were reported as the higher level of academic satisfaction and are able to absorb more knowledge.

METHODOLOGY

This study employed quasi-experimental research design. Specifically, the non-randomised pre-test post-test control group design, in which intact groups were assigned to the experimental and control groups. As the name implies, the design involves two groups (experimental and control). The population for this study consists of all Upper Basic II students of public secondary schools in Pankshin Local Government Area of Plateau State. There are twenty-three (23) public secondary schools with a total number of one thousand nine hundred and eighty-two (1982) students in the Upper Basic II level in Pankshin. Lottery method of simple random sampling technique was used in sampling the schools, where the names of all the schools within Pankshin were written inside pieces of papers, then collected in a box and thoroughly mixed. The researcher picks the papers one after the other. The first name of a school whether from a rural or urban location shall be used then the researcher keeps picking until the opposite of the first location is picked. Two instruments were used for data collection. They are the Social Studies Achievement Tests (SSAT), and Upper Basic II Students Interest in Social Studies Questionnaire (UBSISSQ). The Mean, Standard Deviation and Simple Percentage were used in

answering the research questions. Analysis of Covariance (ANCOVA) and (MANOVA) were employed in testing the hypotheses at 0.05 level of significance. ANCOVA was used to analyze the differences between the treatment and the control groups on the dependent variable based on pre-test-post-test design, especially since the samples were used as intact groups. This technique helped in controlling extraneous variables and contamination due to biases as well as serves as a means of increasing the power of the analysis done with it. The t-test decision rule states that; if the p-value

is less than 0.05 level of significance the null hypothesis will be rejected. But if the p-value is greater than 0.05 level of significance the null hypothesis will be accepted.

RESULTS

Research Question One

Table 1: Pre-test and Post-test Achievement Mean Scores of Students in Experimental and Control Groups

Group		Pre-test		Post-test		Mean	
	N	Mean	SD	Mean	SD	Gain	$\bar{x}$- Diff
Experimental	76	39.01	8.93	64.12	13.80	25.11	
							21.37
Control	80	38.96	9.63	42.70	10.25	3.74	

The data in table 1 reveals the results of pre-test and post-test achievement mean scores of students in experimental and control groups. The result for the experimental group shows post-test mean score of ($\bar{x}$ = 64.12, SD =13.80) is higher than the pre-test mean score ($\bar{x}$= 39.01, SD =8.93) with a mean gain of 25.11, indicating that there was improvement in the achievement of students after treatment. Also, for the control group the mean score is ($\bar{x}$ =38.96 , SD = 9.63) at the pre-test, while at the post-test, the mean score is

($\bar{x}$=42.70 , SD =10.25) with a mean gain of 3.74, The findings show that students in the experimental group had higher achievement mean scores after treatment using self-regulated learning as against those in the control group who were not given treatment, with a mean difference of 21.37.

Research Question Two

Table 2: Pre-test and Post-test Interest Mean Scores of Experimental and Control Groups

Group		Pre-test		Post-test		Mean	
		Mean	SD	Mean	SD	Gain	$\bar{x}$- Diff
Experimental	6	17.92	4.75	35.09	4.66	17.17	
							15.12
Control	0	17.08	4.42	19.13	4.76	2.05	

The data in table 2 reveals the results of interest mean scores of the experimental and control groups before and after exposure to self-regulated learning in social studies in Pankshin. The result for experimental group shows that the post-test interest mean score ($\bar{x}$ =35.09 , SD = 4.66) is higher than the pre-test interest mean score ($\bar{x}$ =17.92 , SD = 4.75) with a mean gain of 17.17, indicating that there was improvement in the interest of students after treatment. Also, for the control group the interest mean score is ($\bar{x}$

=17.08, SD = 4.42) for the pre-test, while for the post-test, the mean score is ($\bar{x}$=19.13, SD =4.76) with a mean gain of 2.05. The findings show that students in the experimental group had a higher interest mean scores after treatment using self-regulated learning as against those in the control group who were not given treatment, with a mean difference of 15.12.

Research Question Three

Table 3: Achievement Mean Scores of the Male and Female Students after Exposure to Self-Regulated Learning

Group	Gender	Post-test			
		N	Mean	SD	$\bar{x}$- Diff
Experimental	Male	23	65.35	10.58	
					1.77
	Female	53	63.58	15.05	

The data in table 3 reveals the result of achievement mean score of the male and female students after exposure to self-regulated learning in Social Studies in Pankshin. The result shows that the post-test mean score for male is 65.35 with a standard deviation of 10.58, while the achievement mean score of females is 63.58 and a standard deviation of 15.05. The findings show that male students had a higher achievement mean scores than the female students after treatment using self-regulated learning with a mean difference of 1.77.

Testing of Hypotheses

Hypothesis One

Table 4: ANCOVA Result on Post-test Achievement Mean Scores of Students Exposed to Self-Regulated Learning Technique and those not Exposed

Source	Type III Sum of Squares	Df	Mean Square	F	p-value	Partial Eta Squared
Corrected Model	18075.609[a]	2	9037.805	61.735	.000	.447
Intercept	19646.301	1	19646.301	134.200	.000	.467
Pre-drug abuse	196.170	1	196.170	1.340	.249	.009
Group	17869.039	1	17869.039	122.060	.000	.444
Error	22398.564	153	146.396			
Total	480907.000	156				
Corrected Total	40474.173	155				

a. R Squared = .447 (Adjusted R Squared = .439)

ANCOVA was used to determine the difference between post-test achievement mean scores of students exposed to self-regulated learning technique and those not exposed. The main effect of experimental group yielded ($\bar{X}$= 64.12; SD = 13.80) and control group ($\bar{X}$= 42.70; SD = 10.25); F (1, 153) = 122.06, P < 0.05. Since the p-value of .000 is less than the 0.05 level of significance, the null hypothesis was rejected. This indicates that the achievement mean score of students in the experimental group significantly differ from that of the control group. The result further reveals an adjusted R squared value of .439 which means that 43.9 percent of the variation in the dependent variable which is students' achievement in Social Studies is explained by variation in the treatment of self-regulated learning technique, while the remaining is due to other factors not included in this study. Hence, we can say that self-regulated learning technique did increase students' achievement in Social Studies.

Hypothesis Two

Table 5: ANCOVA Result on Post-test Interest Mean Scores of Students Exposed to Self-Regulated Learning Technique and those not Exposed

Source	Type III Sum of Squares	Df	Mean Square	F	p-value	Partial Eta Squared
Corrected Model	10512.231[a]	2	5256.115	282.833	.000	.787
Intercept	3850.605	1	3850.605	207.202	.000	.575
Pre-test	575.778	1	575.778	30.983	.000	.168
Group	9415.978	1	9415.978	506.676	.000	.768
Error	2843.327	153	18.584			
Total	126271.000	156				
Corrected Total	13355.558	155				

a. R Squared = .787 (Adjusted R Squared = .784)

Table 5 ANCOVA was used to determine the difference between post-test interest mean scores of students exposed to self-regulated learning technique and those not exposed. The main effect of experimental group yielded ($\bar{X}$= 35.09; SD = 4.66) and control group ($\bar{X}$= 19.13; SD = 4.76); F (1, 153) = 506.68, P < 0.05. Since the p-value of .000 is less than the 0.05 level of significance, the null hypothesis was rejected. This indicates that the interest mean score of students in the experimental group significantly differ from that of the control group. The result further reveals an adjusted R

squared value of .784 which means that 78.4 percent of the variation in the dependent variable which is students' interest in social studies is explained by variation in the treatment of self-regulated learning technique, while the remaining is due to other factors not included in this study. Hence, we can say that self-regulated learning technique do increase students' interest to Social studies.

Hypothesis Three

Table 6: ANCOVA Result on Achievement mean scores between Male and Female Students in Social Studies in the Experimental Group

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	736.386[a]	2	368.193	1.983	.145	.052
Intercept	22447.254	1	22447.254	120.902	.000	.624
Pre-test	686.537	1	686.537	3.698	.058	.048
Gender	36.167	1	36.167	.195	.660	.003
Error	13553.548	73	185.665			
Total	326739.000	76				
Corrected Total	14289.934	75				

a. R Squared = .052 (Adjusted R Squared = .026)

Table 6 analysis of Covariance (ANCOVA) was conducted to determine if there is no significant difference in the achievement mean score between male and female students in social studies after exposure to self-regulated learning technique. Table - shows that the main effect of male yielded (M = 65.35; SD = 10.58 and female (M = 63.58; SD = 15.05); F (1,73) =.195, p > 0.05, since the p-value of 0.660 is greater than 0.05 level of significance, the null hypothesis was rejected, indicating that there was no significant effect of gender on the achievement of students taught social studies using self-regulated learning technique. Hence, we can say that there is no significant effect of gender on achievement of students exposed to self-regulated learning technique in Pankshin.

DISCUSSION OF THE RESULT

The findings from the pilot study will serve as a guide to the main study. The summary of the findings: the result of the study shows that the post-test mean scores of the experimental group of ($\bar{x}$ = 64.12, SD =13.80) is higher than the pre-test mean score ($\bar{x}$= 39.01, SD =8.93) with a mean gain of 25.11, indicating that there was improvement in the achievement of students after treatment. Also, for the control group, the mean score is ($\bar{x}$ =38.96, SD = 9.63) at the pre-test, while at the post-test, the mean score is ($\bar{x}$=42.70 , SD =10.25) with a mean gain of 3.74, showing that students

in the experimental group had a higher achievement mean score after treatment using self-regulated learning as against those in the control group who were not given treatment, with a mean difference of 21.37.

The results of interest mean scores of the experimental and control groups before and after exposure to self-regulated learning in Social Studies in Pankshin, for experimental group shows that the post-test interest mean score ($\bar{x}$ =35.09, SD = 4.66) is higher than the pre-test interest mean score ($\bar{x}$ =17.92 , SD = 4.75) with a mean gain of 17.17, indicating that there was improvement in the interest of students after treatment. For the control group the interest mean score is ($\bar{x}$ =17.08, SD = 4.42) at the pre-test, while at the post-test, the mean score is ($\bar{x}$=19.13 , SD =4.76) with a mean gain of 2.05. The findings show that students in the experimental group had a higher interest mean score after treatment using self-regulated learning as against those in the control group who were not given treatment, with a mean difference of 15.12.

Results of achievement mean scores of the male and female students after exposure to self-regulated learning in Social Studies in Pankshin, shows that the post-test mean score for male is 65.35 with a standard deviation of 10.58, while the achievement mean score for female is 63.58 and a standard deviation of 15.05. The findings show that male students had a slightly higher achievement mean score than the female students after treatment using self-regulated learning with a mean difference of 1.77.

CONCLUSION/RECOMMENDATIONS

Self-regulated learning accord students the opportunity of being masters of themselves in their own learning. With self-regulation technique, students can manage themselves as learners and direct their own behaviour including their attention during learning. It is a cognitive strategy that appears to enable students to actively be in-charge of the learning process and to monitor their own progress in learning exercise. Child's active involvement in learning, to free the child from dependence on the teacher. The study recommend that Government should be proper care-giving support to learners on the area of their interest. Students' motivation should be adequate to enhance the level of skills in them.

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