

Using Questioning Method to Unlock Skills of Critical Thinking, Creative Thinking and Enhanced Performances in Social Studies Classrooms in Nigerian Schools

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ABSTRACT

Aim of the study: This study examined the effect of using questions to unlock skills of critical thinking and creative thinking and enhanced performances in social studies classroom in Nigeria schools. The two schools used for this study were located in two different States in Ekiti and Ondo State.

Methodology: The sample included fifty males and fifty female pupils whose ages were between six and eleven years, a total number of one hundred pupils were randomly selected as sample for this study. The parallel or equivalent technique was used to distribute fifty into the experimental and fifty into the control group for each group, a total of 25 males and 25 female pupils constituted the target group. A total number of 100 copies of achievement multiple choice test was administered on the pupils as pretest before commencement of the study, rearranged and used as post-test after six weeks of intensive coaching of the experimental and control groups by the researcher and two research assistants respectively.

Findings: The findings of the study revealed that there was significant difference between the pupils in the experimental group and those in the control group in terms of their performance in the test administered after treatment, but not prior to treatment. Equally, the study revealed that gender has a significant effect on the performance of male and female pupils in social studies.

Conclusion: It is recommended that teachers of social studies at primary school level should be compliant with the modern trend recognizing the pupil's factor as the starting point for the teaching and implementation of the curriculum. Teachers should modify their methodology to accommodate the role of questioning which despite proven benefits has been remarkably reduced in the classroom.

Keywords: Questioning Method, Critical Thinking, Creative Thinking, Academic Performance, Nigeria.

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Introduction

Questions are used to assess the feelings, beliefs, opinion, ideas and attitudes of the person being questioned. Questions can be used to better the understanding and to nurture students' interest and interest in learners. It is a key skill in communication. Questioning helps pupils to develop competencies that leads to enhanced confidence, and resiliency they will need to face future challenges. Whatever method or a teaching technique a teacher adopts in the teaching learning process. Questions should be used frequently and regularly whether at the introductory stage, the body of the lesson or as at the evaluation stage. Questions help to arouse curiosity, motivate the search for knowledge, challenge the mind, stimulate the imagination and help students clarify their ideas. Ekiugbo (2023) opined that schools should focus more on teaching their students critical thinking skills, intellectually standards and cultivating intellectual traits (such as intellectual humility, intellectual empathy, intellectual integrity and fair mindedness than focusing on memorizing facts by rote learning. This comes on the platter of questioning. Questioning enables the student to analyze, evaluate, explain and restructure thinking, thereby decreasing the risk of acting and thinking within a false premise.

Questions have been given various classification. One classification is closed and open ended questions. Gallagher and Asher in Osokoya as cited by Audu, 2004 classified questions as cognitive memory questions which require a simple recall of information e.g. who is the president of Nigeria? Convergent questions, questions in this category require a single correct answer e.g. what is the longest river in Nigeria and Divergent questions which are open ended questions which may have many answers to them e.g. mention some top politicians in Nigeria and Evaluative questions which require students to pass judgment on a person or an action i.e. which is better for Nigeria? Civilian or a Military government.

Questions which are meant to determine what a person knows are called Diagnostic questions. At times teachers may use questions to develop line of thought in order to discuss new ideas or different concepts. Such questions are meant to develop thought and ability for expression. These are called Diagnostic questions, the teacher may use questions to develop a line of thought in order to discuss new ideas of different concepts, such questions are meant to develop thought and ability for expression. These are called developmental questions. We also have information questions meant to seek for a piece or pieces of information. A good social studies teacher should understand the art of questioning in the classroom. Adeosun (2018) explained that the art of questioning should be:

1. Asking questions before calling the students to answer
2. Spreading questions evenly over the class
3. Do not call on only those who indicate they want to answer
4. Call those who are not paying attention, to call them to attention
5. Allow pupils time to answer the question
6. Questions should be clear without any ambiguity
7. Do not force a student to answer a question when he cannot
8. Ask question only once

Another classification of questions by (Itedjere and Osakwe) 2003 is

1. Open ended question
2. Close ended question
3. Recall question
4. Process question
5. Funneling questions

6. Rhetorical question

Closed questions invite a short focused answer, such answers can often but not always be either right or wrong. They can be effectively used early in conversations to encourage participation and can be very useful in facts-finding such as research.

By contrast open questions; allow for much longer responses and therefore potentially more creativity and informative. Leading or Loaded question, usually subtly, points the respondents answer in a certain direction. Children are particularly susceptible to leading questions are more likely to take the lead for an answer from an adult. For example when a question is given to a child e.g. "how was school today?" One is not asking for any judgment about how good or bad the day has been, and one is more likely to get a more balanced, accurate answer.

Questions can also be in the form of recall and process questions. Recall questions requiring something to be remembered or recalled like what is your mothers' maiden name as this requires the respondent to recall some information from memory. Processed question require more thought and analysis and or a sharing of opinion such as what are the advantages and disadvantages of Military government in Nigeria, we also have rhetorical questions which are questions of humor and they don't require an answer because they are humorous. They often used by teachers in the class room to get the students to think and hence they are used to promote thought, for example when a teacher ask the question "who would not want to pass this examination at the end of this course? Funneling in questioning use clear questioning to essentially funnel the respondents answer that is asked, a series of questions that becomes more and more restrictive. It may start with open questions and with closed questions or vice versa such as tell me more about your holidays, what did you experience while there? Did you see train stations or horses?

Whatever the technique of questioning, questioning can stimulate learning, develop the potential of students to think, drive to clear ideas, stir the imagination and incentive to act. It is one of the ways teachers help students develop their knowledge more effectively. Paul and Elder (2000) state that thinking is not driven by answers but by questions. Had no questions been asked by those who laid the foundations for a feelings, the field would never had developed in the first place. In order to keep a field of thought or a (concept/topic) alive, teachers have to constantly ask questions, Teachers are able to challenge existing or established answers through questioning, to challenge students thinking. Other reasons for questioning as outlined by Famuyide 2015 are;

- ❖ 1. to develop interest and moderate students to become actively involved in lessons
- ❖ 2. to develop critical thinking skills
- ❖ 3. to review learning
- ❖ 4. to stimulate students to pursue knowledge on their own and ask their own questions

Ekiugbo [2023] looked at these functions of questionings, and states that instruction which include posing questions is more effective in producing achievements gains than instruction carried out without questioning students. There are two main categories of questions teachers use within classrooms, these are lower cognitive questions: lower order, convergent or closed questions, which usually requires memory recall of previously learnt information. There is only one right or wrong answer as: when was the independence of Nigeria gotten from Britain? We also have higher cognitive questions: higher order, divergent or open questions. These requires students to analyze information, and apply their knowledge. For example, what are the consequences of military regime in Nigeria?

A research conducted by Ekiugbo 2023 showed that 20% of classroom questions are higher cognitive questions, 20% are procedural questions like have you got your bags with you and why, and 60% are lower cognitive questions. These suggest that teacher need to increase their use of higher cognitive questions in order to stretch and challenge students thinking. This is creative thinking.

An important task of schooling not only in Nigerian classrooms but all over the world is to heighten the influence of teaching on pupils' mental development. Creative thinking figures in the resolution of a fundamentally new task that does not emerge from what it is already known, but requires transformation outside the boundaries of what it already known; Adewuya (2003). Critical thinking as a form of judgment is specifically purposeful and reflective, it involves acquiring information and evaluating it to reach a well justified conclusion or answer. Hedrick (2005). Opined that schools should focus more on teaching students critical thinking skills, to override man's natural tendency of ego centricism, self-delusion and close mindedness. The goal of critical thinking is to evaluate in a reasoned and unbiased way, what is read, heard and observed in order to judge its validity or worth, while creative is an attempt to get additional knowledge outside of what is already known.

In a world constantly bombarded by new discoveries and ever increasing amount of knowledge, the ability to think critically and creatively about information and to reflect on what is learned from it is essential. This comes with questioning. In Nigeria, where many of the graduates knowledge and skills do not meet society's requirement for well-educated citizens, as the curriculum is tailored more towards facts and concepts in the discipline at lowest cognitive level. Emaro (2023) noted that the notion of critical and creative thinking skills is broad ranging and encompassing in variety of thinking skills such as identifying assumptions, identifying and dealing with equivocation, making value judgment, analyzing argument asking or answering questions or clarification or challenge and judging the credibility of a source. These important skills meant for addressing societal issues and problems with a view to proffer solutions to them, can be articulated in the students in social studies classroom, if questioning technique is given its right position in the methodology of Social studies in Nigerian schools. If properly used, it can unlock the potentials of creative thought and creative thinking skills and this could enhance increased performance in students' academic work. This paper seeks to address this.

Statement of Problem

Teaching may be defined as a systematic, rational and organizing process of transmitting knowledge, attitude and skills in accordance with professional ethics. A classroom teacher is therefore a person who has undergone approved professional training in education, at the appropriate level, capable of imparting knowledge, attitude and skills to the students.

Teacher's methodology is very important in the sense that, it may promote or hinder learning. It may promote mental activities which is the basis of social power. It may also hinder interaction and curiosity thereby making self-reliance and survival difficult. Teachers need to be well equipped in methodology as the teacher is responsible for translating policies into actions in the classroom.

Recent socio political and economic changes in the world and within nations have brought changes in educational goals. The schools are called not only to equip learners with basic knowledge of social studies content, but also, with higher skills such as problem solving and thinking skills, that allow for self-development and continuous learning and information communication technology. (ICT) This can be found with the artistry of questioning in the classroom. With good questioning method, pupils are trained to embrace creative thinking and imaginations and hence they become independent and critical thinkers and thus be able to face challenging situation that demand use of creative thinking later in life.

Experience has shown that in spite of the proven benefits of questioning method, it has not been meaningfully employed as most methods used by the teachers today are those that appeal to the interest and concern of the teachers, leaving students interest, need and value structure behind. It appears that Nigeria of today needs education that should develop the capacities to think intelligently on issues and problems so as to make effective personal and rational decision on the recipients. The importance of developing and enlarging learner's ability to develop empathy, confidence, caring and commitment to finding solutions to social problems in the society is a cardinal objective of creative and critical thinking which the questioning method can inculcate in the pupils, if properly used. Besides it seems that Social studies teachers are not complaint with the modern trend of recognizing the pupils' factor as starting point

for teaching and implementation of the curriculum which is the hall mark of the questioning method. This research seeks to use the questioning method to unlock critical thinking and creative thinking skills and the enhance performances in Social studies classroom.

Purpose of the Study

The study intends to find if there is any significant effect of utilization of questions to unlock critical thinking, creative thinking and enhanced performance" in social studies in Nigerian schools. Specifically, the study intends to:

1. Determine the effect of questioning on pupils critical, creative thinking skills and enhanced academic achievement in social studies classroom
2. Find out if gender has significant effect on the performance of male and female pupils in social studies.

Research Questions

The study is geared towards answering the following research questions:

- i.) Will pupils taught by the questioning method perform better than pupils taught without this method in concepts in social studies that require critical and creative thinking.
- ii.) Will male pupils taught by the questioning method perform better than the female pupils taught without the questioning method in concepts in social studies that require critical and creative thinking?
- iii.) Will male pupils taught by the questioning method perform better than female pupils taught by questioning method in concepts in social studies that require critical and creative thinking?

Research Hypotheses

The following hypotheses were generated and tested for the study at 0.05 level of significance.

- (1) There is no significant differences between the performances of pupils taught with the questioning method and pupils taught without the questioning method using their post test scores in concepts in social studies that require critical and creative thinking.
- (2) There is no significant differences between the performance of male and female pupils taught with the questioning method and male and female pupils taught without the questioning method using their post test scores in concepts in social studies that require critical and creative thinking.

Methods and Materials

The study was a quasi-experimental research design which involve parallel equivalent group design. The experimental group was exposed to treatment using the questioning method and related educational materials, while the control group was not exposed to treatment similar to that used in the experimental group. Teaching method constituted the independent variables. The dependent variable were the scores of subject in the test namely "the social studies Achievement test (SSAT). The social studies Achievement test was designed by the researcher given face, content and construct validity with colleagues in Tests and Measurement Department in the University of Agbor, Delta State. Necessary amendments were made as suggested by them. The reliability of the instrument was determined through test-retest method, yielded a reliability coefficient of 0.71 which is high enough for the research.

The participants for the study was all the primary school pupils in Ekiti and Ondo State, which were experimental and control schools respectively. Fifty pupils were selected from each schools using the purposive sampling technique, twenty five male and twenty five female pupils. Therefore, a total of one hundred pupils were selected for this study. The researcher administered a pre-test on the one hundred pupils simultaneously before the study began. The experimental group was taught using the questioning method and suitable materials for the level of the pupils under focus, the control group was not exposed to

the use of questioning method. Two research assistants trained and instructed to use only the chalkboard and recommended Social studies textbook, taught pupils and no questions was asked by the assistants before, during, and after the class for the six weeks period of intensive coaching. The pupils were also not permitted to ask any question(s) throughout.

The researcher administered a posttest achievement multiple choice test on both groups. The data (scores) retrieved from the post test scores were subjected to inferential statistics for the analysis. Specifically, hypothesis 1 was subjected to Analysis of variance of statistical tool, while Analysis of covariance was used to test hypothesis 11, both at 0.05 level of significance.

Hypothesis I: there is no significant differences between the performance of pupils taught with the questioning method and people taught without the questioning method using their post test scores in concepts in Social studies that require critical and creative thinking.

Table I: *Summary of ANOVA on the performance of pupils taught with the method using their pretest and post test score in concepts in social studies that require critical and creative thinking.*

Source	Type 111 sum of Square	Df	Mean Square	F.cal	F table	P value
Corrected Model	857.020	3	285.67	7.60	2.60	0.000
Intercept	91506.420	1	91506.42	2434.69	3.84	0.00
Test	375.380	1	375.380	9.988	3.84	0.002
Group	356.420	1	386.420	10.25	3.84	0.002
Test group	95.220	1	95.220	2.533	3.84	0.113
Error	7366.560	19	37.584			
Total	99730.00	100				

In table 1, there is a significant difference between the main effect of treatment on the performance of pupils since p value (0.002) is less than 0.05 and calculated (8.988) is greater than F table (3.84). Also there is a significant difference between the main effect of the group on the performance of pupils since R values is less than 0.05 and the calculated (10.281) is greater than F table (3.84) however, the interactive effect of test and .group has no significant effect on the performance of the pupils at 0.05 level because f value (0.1130) is greater than 0.05 and f calculated (2.5330) is less than F table (3.84).

The interpretation of the data reveals that the group of pupils taught with the questioning method performed better than the control group that was not taught with the questioning method.

Hypothesis II

There is a significant differences between the performance of male and female pupils taught with the questioning method using their post test scores in concepts in social studies that require critical and creative thinking.

Table II: *Summary of ANCOVA on the performance of male and female pupils taught with the questioning method and male and female pupils taught without the questioning method using their post test scores in concept in social studies that require critical and creative thinking.*

Source	Type 111 sum of Square	DF	Mean square	F. cal	F table	P value
Corrected Model	437.377	4	109.344	5.97	2.40	0.000
Intercept	5593.052	1	5593.052	305.216	3.94	0.000
Pre-test	1.457	1	1.457	0.080	3.94	0.779
Group	423.557	1	423.557	23.114	3.94	0.986
Sex	5.402E.03	1	5.402E.03	0.000	3.94	0.986

Group sex	4.359	1	4.359	0.238	3.94	0.627
Error	1740.863	95	18.325			
Total	53980.00	100				

From the table above, the result shows that there is a significant differences between the main effects of group on the performance of pupils since the P value (0.000) is less than 0.5 and the F. calculated (23.114) is greater than F table (3.94) at 0.5 level of significance. However the main effect of sex on the performance of pupils has no significance difference because the P value (0.986) is greater than 0.05 and F calculated (0.000) is less than F table (3.94). Likewise, there is a significant difference between the interactive effect of sex and group on the performances of pupils using their post test scores in Social studies, while the pretest is used as covariant because the P value (0.67) is greater than 0.05, the F Cal (0.218) is less than F table(3.94) at 0.05 level of significance. The interpretation of the above data is that gender has no significant effect in the performance of male and female pupils in social studies concept that require critical and creative thinking.

Discussion of Findings

The findings of this study reveal that the group taught using the questioning method with an experimental situation of learners centered recorded higher post test score. This method explores the learners feeling and thought and thus decreases the risk of acting or thinking within a forced premise. This is in line with Paul and Elder (2000) who opined that thinking is not drawn by answers, but by questions." They opined, that had no question been asked by those who laid the foundation for a field..... the field would never have developed in the first place. Literature in psychology supports active participation in teaching and learning as seen with the questioning method. As Ekiugbo (2005) puts it "active participation by learners is preferable to passive reception of the contents to be learned and a motivated learner is better than one who is not motivated. Pupils taught using the questioning method displayed a lot of enthusiasm throughout the experiment. This method no doubt develops in pupils self-confidence and cooperative spirits as well as creates awareness for self-expression and self-development. Famuyide (2015) argued that relevant students thinking and active problem solving activities go on in a class where questions are asked before, during and after the lesson. On the other hand, the class taught without questions prior, during and after the lesson had very limited teacher pupils, pupils' teacher exchange and this killed pupil's initiative and inhabits their efforts to take independent decision both within and outside the classroom setting. This method is teacher and subject centered. The reports of Adeyemi (1987) and Ogunyemi (1994) underscored the relative superiority of innovative teaching method like questioning method, problem solving and inquiry over the conventional ones, like the lecture method.

Findings on hypothesis II relating to sex suggested at the general level that there is no significant differences in the achievement mean scores of male and female pupils in the experimental and control group as shown in the co-variance analysis as well. The use of sex as an intervening variable in this study was informed by the general assumption that gender does a significant factor, Emarho (2020). The Ancova table indicated that gender does not significantly affect the performances of pupils in the same way, as the teaching method did. The findings support the work of Adeosun (2002) whose findings revealed that boys and girls perform equally well in Mathematics. This runs contrary to the work of Agwumuria (2019) who reported that female students performed better in reading and writing skills

Conclusion

The study concluded that a significant difference in the achievement mean scores of pupils exposed to the different methods of teaching as exposition of pupils to questioning method enhanced and facilitated achievement of the Social studies concept taught. Study also concluded there is a significant difference in the post-test mean scores of pupils in experimental and control group. There is no significant difference in achievement mean scores of male and female pupils in the experimental and control group. Also the findings of this investigation provided some empirical studies in support of the superiority of the questioning method in handling concepts that require critical and creative thinking in Social studies.

Recommendations

Teachers should be encouraged to use innovative methods to handle concept require critical and creative thinking in social studies, the questioning method is one of them. The participation of the pupils is a means to a much larger and that the preserving and adding a new vibrancy to culture of egalitarianism, democracy, secularism and equality. These values can be best realized through an investigated and well-designed curriculum that enables learners' emancipation.

Recommendation was made on how questioning should be infused in social studies lesson at this level so as to seek the balance in children lives by creating the optimal development and to unlike the critical and creative thinking skills that are expressed as enhanced performances in social studies classroom.

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