

Effect of Concept Mapping Technique on Academic Performance among Secondary School Geography Students in Katsina State, Nigeria

Abdullahi Jiya Idris¹

1 Department of Science and Vocational Education, Faculty of Education, Umaru Musa Yar'adua University Katsina

* Correspondence: jiyaidria@gmail.com

Abstract: This study investigated the effect of concept mapping technique on academic performance among secondary school geography students in Katsina State, Nigeria. Two objectives, two research questions and two null hypotheses were formulated and analyzed. The study adopted a quasi-experimental design. A sample of 156 (94 males and 62 females) which was randomly selected from two schools out of 25 schools with a total population of 5953 (3,317 males and 2,636 female) was used for the study. A 40-item multiple choice titled Geography Performance Test with reliability $r = 0.77$ was used to collect data. Students in the experimental group were taught using concept mapping while the control group was taught using lecture method. Research questions were answered using Mean and standard deviation. Null hypotheses were tested using independent sample t-test at 0.05 level of significance. The results of the study showed that, there is significant difference between the mean score on performance of students when taught using concept mapping and those taught using lecture methods in favor of the students taught geography using concept mapping. However, there was no significant difference between the mean score on performance of male and female students taught geography using concept mapping. It was concluded that, concept mapping strategy have significant effect on the students' performance in geography than the traditional lecture method. It was recommended that, geography teachers should expose students to concept mapping strategy so as to improve their performance in geography and both male and female students should be taught geography using concept mapping in other to equally help them learn and perform better.

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1. Introduction

The importance of education is undisputable for every individual. Every successful person is not without education. Apparently, people only become more useful and civilized with better education. In areas where citizens in that environment receive appropriate education, life cannot be as thriving and prosperous as location where there is a high standard for education. Despite the importance of education, a fall in the standard of education in Nigeria when compared with the education standard in other countries

has been witnessed. Students in tertiary institutions of learning perform poorly and sometimes rusticated due to inability to meet up with the minimum required Cumulative Grade Point Average (Umaru Musa Yar'adua University, 2020). Researchers blamed this menace on the poor standard of education in secondary schools.

Secondary education is the education children receive after primary education and before the tertiary stage. Secondary education offers diversified curriculum to cater for the differences in talents and as well provides all primary school leavers with the opportunity for education of a higher level (Federal Republic of Nigeria, FRN, 2013). At the senior secondary level, many subjects are offered with some labelled as core subjects and others as electives (vocational and non-vocational subjects). Apart from the main core subjects, i.e. English Language, Mathematics and Civic Education, Geography is also one of the elective but a core subject for some options.

Secondary school geography curriculum in Nigeria is structured to contain aspects such as map reading, physical geography, regional geography and human geography (Amosun, 2016). All these areas are well spelt out topic by topic which the geography teacher ought to teach and get the students ready for external examination. Students with interest to study geography and geography-related courses are mandated to master concepts in geography and obtain at least, a credit pass in the subject. Unfortunately, students usually experience difficulty in understanding geography lesson (Onuoha & Eze, 2013). One reason identified is the weakness the teaching method adopted by the teacher teaching the subject (Onuoha & Eze, 2013). The difficulty in learning geography result in high level of attrition of students at the senior secondary certificate examination level in Nigeria (Rilwani, Akahomen & Gbakeji, 2014). The West African Examination Council (WAEC, 2020) reported that, students' performance in geography has dropped compared to the previous years. Some of the contributing factors identified include, none coverage of syllabus as evidence in their poor performance, poor expression, mere listing of answers that require explanation, avoidance of certain vital questions, poor map works among others (WAEC, 2020).

In this recent time, there has been a paradigm shift in curriculum implementation. The significance of how learners prefer to learn is now taken into cognizance. Schools have now realized the importance of the ways students learn (Olatoye, Aderogba & Aanu, 2011). The constructivists proposed different theories supporting the shift of classroom instruction from teacher-centered to learner-centered. The conventional lecture method commonly adopted by teachers could also be the cause of students' poor performance. This is because, the use of lecture method entails a one-way flow of communication from the teacher to the students. Aniodoh (2011) lamented that, lecture method negates teaching as it does not give rooms for effective and meaningful learning but only enhances intellectual positivity and weariness of the learners. In Nigerian secondary schools, traditional teaching (lecture) method is most often used by Geography teachers for instruction. This kind of method may not be very effective when teaching aspect of geography like human geography. In order to foster students' learning of human geography, certain teaching strategies that will help link the components in a holistic manner were recommended. One of such teaching strategy is concept mapping.

Concept mapping is a teaching strategy that can overtly engage students in meaningful learning processes. Concept mapping shows the relationships between a set of

concepts or ideas which gives clear picture of how the concepts are related (Gimba, Daramola and Jimwan, 2015). Concept mapping promotes meaningful learning and retention of knowledge for a long period of time and helps students negotiate meaningful learning (Hyerle, 2002 in Simone (2018) describes concept mapping as a learning strategy that allows learners to externalize visual and verbal information which help them improve their understanding of learning. Concept mapping teaching strategy is therefore advantageous as it allows the learners to extract important information, relate ideas and represent them in a structured manner. It is against this background that the study investigates the effect of concept mapping technique on academic performance among Secondary School geography students in Katsina State, Nigeria.

2. Statement of the Problem

One of the objectives of education in Nigeria is to enhance science and technology which would enable the nation tackle her economic, social and technological problems. Geography is one of the subjects taught in secondary schools which aim at inculcating skills and relevant attitude in students so that, they can face challenges created by population explosion, environmental pollution, regional socio-economic inequality, resource depletion etc. Secondary school leavers are expected to obtain at least a credit pass in the subject before they can be given admission to study any geography-related course. Unfortunately, students are reported to have encounter difficulty in learning the subject (Onuoha & Eze, 2013) and this eventually result in high level of attrition of students at the Senior Secondary Certificate Examination Level in Nigeria (Rilwani, Akahomen & Gbakeji, 2014). The causes of this poor performance is attributed, but not limited to, none coverage of syllabus, poor expression, mere listing of answers that require explanation, avoidance of certain vital questions, poor map works, and use of irrelevant teaching methods among others (WAEC, 2016-2022). Research evidence abound that highlight a number of factors responsible for low academic performance in geography, among the several factors enumerated to account poor teaching method seem to be a major contributory factor. The neglect of activity-oriented method of teaching has led to abstractness which makes the students less active (passive learners) and more prone to rote memorization. Based on this, many researchers advocate the use of self-learning strategies such as concept mapping, as a way of enhancing students' performance and promoting good attitude to geography. As far as the researcher is concerned, no empirical evidence is available to back this claim especially in Katsina State where this study is taking place. It is on this note that the study seeks to investigate the effect of Concept Mapping Technique on Academic Performance among Secondary School Geography Students in Katsina State, Nigeria.

3. Objectives of the Study

The objectives of this study were to:

1. Investigate the effect of concept mapping technique on students' academic performance in geography in senior secondary schools of Katsina.
2. Investigate the effect of concept mapping technique on male and female students' academic performance in geography in senior secondary schools of Katsina.

4. Research Questions

1. What is the difference between the mean academic performance scores of Geography students taught using concept mapping and those taught the same concept using lecture method in senior secondary school in Katsina state, Nigeria?
2. What is the difference between the mean academic performance scores of male and female students taught Geography using concept mapping?

5. Hypotheses

H0₁: There is no significant difference between the mean academic performance score of geography students taught using concept mapping and those taught the same concept using lecture method in secondary schools of Katsina state.

H0₂: There is no significant difference between the mean academic performance scores of male and female students taught Geography using concept mapping in senior secondary schools of Katsina state.

6. Literature Review

Meta-cognition has several strategies and techniques for promoting an educational experience that help students and teachers move beyond standard classroom parameters. Meta-cognition which is a strategy used in self-directed learning are mental processes that assist learners to reflect on their thinking by internalizing, understanding, and recalling the content to be learned. Such strategies include schema activation, cognitive mapping, consequence mapping, vee- mapping, concept mapping and so on. In recent research studies, researchers used many of the meta-cognition strategies alone or with other methods, techniques and technologies to prove their points and some of them are reviewed here.

Cheema and Mirza (2013) analyzed the effect of concept mapping, a constructivism based learning strategy, on academic performance of 7th grade students in the subject of general science. A quasi experimental research, based on 2x2 factorial research design was adopted for the study, with a sample size of 167 students from two single sex schools randomly selected for the study. A self-developed achievement test was used as pretest and posttest. Data on gain achievement scores were analyzed through 2-way ANOVA. The results showed that the male and female students taught through concept mapping performed better than the students taught through traditional teaching method. They also discovered that male students taught through concept mapping performed significantly better than the female students. The reviewed work used general science while the current work narrows the scope to geography students. This is a gap that this current research filled.

Otor (2013) carried out a study on the effects of concept mapping strategy on secondary school students' achievement on difficult chemistry concepts in Benue state. It also examined the differential effect on the achievement of male and female chemistry students. A quasi-experimental pretest-posttest on group design was adopted for the study. Data were collected from 1,357 SS2 chemistry students using a stratified random sampling procedure from two schools. The instrument used for data collection was a self-developed Chemistry Achievement Test (CAT), on structure of matter and energy changes. The data were analyzed using Analysis of Covariance (ANCOVA) tested at 0.05 level of

significance. He found out that students taught using concept mapping strategy achieved higher and significantly better than those taught using conventional method. There was also a better performance in favour of female students compared to their male counterparts using this method. The study compared the achievement of students in difficult areas in chemistry using concept mapping and conventional method only while the current study is on academic performance in geography.

Luchembe, Chinyama and Jumbe (2014) conducted a study on the effectiveness of concept mapping as a teaching strategy to undergraduate students taking introductory physics course. Seventy (70) students participated in the experiment. A pre-test and post-test was administered to the two groups. The data collected were analyzed using t-test. They found out that the mean score for the experimental group's posttest was higher than the mean score of the control group. This showed that concept mapping was more effective than the tutorial sheet strategy. Questionnaires and interviews were also used to determine the attitude of students towards concept mapping. The findings showed that students had a positive attitude towards the use of concept mapping. The study compared the performance of undergraduate students in physics using concept mapping but the current study compares the effects of concept mapping and conventional method on Academic performance among geography students in senior secondary schools.

Ogbonna (2014) investigated effect of concept mapping on students' achievement and interest in selected concepts from organic chemistry in Federal Capital Territory. It also examined the achievement and interest on both male and female students. Four (4) research questions and four (4) hypotheses guided the study. The study was a non-equivalent pre-test post-test control group quasi – experimental design involving one treatment and on control groups. The sample for the study consisted of about 240 SS II Chemistry students drawn from four out of eight government area of Enugu Education Zone. The intact classes were randomly selected and assigned experimental and control groups. Two instruments, Organic Chemistry Achievement Test (OCAT) and Organic Chemistry Interest Scale (OCIS) developed by the researcher were used for data collection. The items of these instruments were also subjected to face and content validation. Their liability of the instruments was established using Kudar-Richarson formula 20 Cronbach's Alpha respectively. The reliability co-efficient obtained were 0.53 and 0.89 respectively. Concept maps on Alkanoic Acids and Alkanoates (Esters) and notes of lessons were used for classroom instruction for the experimental group, while the control groups, only the notes of lesson were used. Their search questions were answered using mean and standard deviations, while the hypotheses were tested at 0.05 level of significance using 2-way (2x2) Analysis of Covariance (ANCOVA). The results from the study among others showed that: Concept mapping methods have statistically significant effect on students Achievement in Organic Chemistry and as well as significant effect on Students' interest in Organic Chemistry. The study compared the achievement of students in organic chemistry using concept mapping and interest while the current study is on academic performance in geography.

Bright, Alex and Peter (2015) examined the effect of concept mapping approach on students' achievement in Mathematics in Secondary School in Ngor Okpala Local Government Area of Imo State. Based on the objective of the study, three hypotheses guided the study. The quasi-experimental research design was used in carrying out the

study adopting the pre-test – post-test control type. The sample consisted 180 Senior Secondary One (SS1) students comprising of 88 males and 92 females. In each of the schools selected, two intact classes were assigned experimental and control groups. The experimental group was taught mathematical concepts using concept mapping approach while the control group was taught using traditional method. The data required for the study was collected using researcher made questions titled Mathematics Achievement Test (MAT). It had reliability coefficient of 0.79 determined using Kuder-Richardson formula 20 (KR20), mean, standard deviation, analysis of covariance (ANCOVA) and t-test statistical tools were used to analyze the data at 0.05 level of significance. The result of the study showed that, concept mapping approach improved students achievement in mathematics, the method removed gender inequality. Based on the result of the study it was recommended that, concept mapping approach should be used by teachers in teaching mathematics in secondary schools to improve students' achievement. The reviewed work has similar objectives like the present study. While the reviewed work was in mathematics the present study is in the basic science and technology. The reviewed study deal with only achievement while the present study is on both attitudes and achievement. The reviewed work was carried out in Imo state while the present work is in FCT where many ethnic groups in Nigeria are mostly represented.

Nubagbi, Jamabo and Igwe (2018) investigated the effects of cooperative and concept mapping instructional strategies on student's achievement in chemistry. It adopted an experimental design. Through random sampling, sample sizes of 280 SS2 chemistry students were selected from six secondary schools in six Local Government Areas of Rivers State. The students were placed into two experimental groups and a control group. Experimental group I was taught with cooperative teaching method, experimental group 2 was admonished with concept mapping technique and the control group was treated with lecture method. The research instrument was a teacher made Hydrocarbon Chemistry Achievement Test (HCCAT). The instrument was pilot tested and analyzed using Pearson Product Moment Correlation and a reliability coefficient of 0.85 was obtained. Two research questions and two hypotheses guided the study. Mean, percentage and standard deviation were used in analyzing the research questions while analysis of variance (ANOVA) was used to test hypotheses at 0.05 level of significance. Results obtained show that there is a significant difference in academic achievement of students taught with cooperative and concept mapping strategies in respect to gender, location and retention. The male students had better performance in their respective categories. Based on the results, it was concluded that Cooperative Instructional Strategy (CIS) and Concept Mapping Instructional Strategy (CMIS) are effective instructional methods for teaching. Hence, the study recommended the use of both strategies in teaching chemistry in secondary schools. The reviewed work compared two teaching methods that is cooperative and concept mapping instructional strategies on student's achievement in chemistry while the current work is used one teaching method that is concept mapping on academic performance of students in geography.

Kipkemoi (2019) investigated effect of Collaborative Concept Mapping teaching strategy on students' attitudes towards mathematics in secondary schools in Kenya. Specifically, the study sought to find out if there was any difference in Students' attitude toward Mathematics subject when taught using the Collaborative Concept Mapping

Teaching Strategy and the Conventional Methods of Instruction. This study used a Quasi-experimental Solomon Four-Fold research design. The sample for the study comprised 161 forms three students and 4 teachers of mathematics from 4 randomly selected sub-county co-educational secondary schools in the 4 sub-counties of Bomet County. The four co-educational schools were randomly assigned into two experimental (E1 & E2) and two control (C1 & C2) groups. Students in the experimental group were taught using Collaborative Concept Mapping (CCM) Teaching Strategy for three weeks while the control group was taught using Conventional Methods of Instruction. Students' Attitude Towards Mathematics Questionnaire (SATMQ) was used to collect data. Descriptive and inferential statistics were used in data analysis which included frequencies, mean, t-test and ANOVA. All the statistical tests were subjected to a test of significance at alpha (α) level of 0.05. The results revealed that there were statistically significant difference attitudes towards mathematics in favour of CCM between students exposed to Collaborative Concept Mapping teaching strategy and those taught using Conventional Method of Instruction. From the findings it can be concluded that the attitude towards mathematics is marked higher when the students are taught using the Collaborative Concept Mapping Teaching Strategy than when the conventional method is employed. Based on the findings, recommendations were made on the need for teachers to integrate Collaborative Concept Mapping Teaching Strategy (CCM) teaching strategy in the mathematics instruction to foster positive attitude in the subject. There is also need for teacher training institutions to incorporate CCM as one of the strategies in mathematics instruction and that the serving teachers can be retooled to enable them to integrate CCM teaching strategy effectively in Mathematics learning. Mathematics curriculum developers need to restructure and integrate CCM among learner-centered strategies in Mathematics education. The reviewed work has similar objectives like the present study while the reviewed work was in mathematics the present study in the geography Also the reviewed work was done outside Nigeria that is Kenya with main emphasis on attitudes while the present work was carryout in Nigeria on academic performance.

7. Methodology

The design employed for this study is Quasi-experimental design. The populations of this study comprises of all Geography Senior Secondary Two (SSII) Students in the twenty- five (n = 5953) secondary schools across Katsina Zonal Education Quality Assurance. Private secondary schools were excluded from the population in order to work with schools with same characteristics in terms of space, laboratory equipment and teachers' qualification so as to reduce disparities between control and experimental groups. A total number of one hundred and fifty-six (156) SS II Geography students from two secondary schools namely Government College Katsina (Daywing) and Government Senior Secondary School Yandaka served as a sample of the study. The choice in the selection of 156 students as a sample is in line with the Central Limit theory advocated by Kerlinger (1974) and Tuckman (1975) who stated that in an experimental research, 30 samples is viable and adequate enough to represent the entire population of the study. Students from both schools were randomly assigned into experimental and control group.

The instrument for collecting data for the study was Geography Performance Test (GPT). GPT is 40 multiple items contains Five alternatives lettered A-E, meant to measure the students' academic performance in geography concepts across six levels of cognitive learning domains (knowledge, comprehension, application synthesis, analysis and evaluation, Understand and Apply) in accordance to the Revised Bloom's taxonomy (see Table 3.3). GPT is a 40-item multiple choice questions which was adopted from previous questions of the West African Senior School Certificate Examination in Geography. The items were drawn using the following curriculum unit in the senior secondary school geography curriculum (1) Agriculture (2) Industries and (3) Transportation. Each item on GPT was scored two points, making a maximum obtainable score of 80 marks and a minimum of zero. the research questions were answered by using Mean and Standard Deviation. The hypotheses were tested at 0.05 alpha level using SPSS Package Version 23.0.

8. Results and Discussion

8.1. Research Question One

What is the difference between the mean academic performance scores of geography students taught using concept mapping and those taught without using concept mapping?

Table 1. Mean and Standard deviation of academic performance of senior secondary school students taught geography using concept map and those taught using lecture method

Group	N	Mean	Standard Deviation	Standard Error of Mean	Mean Difference
Concept Mapping	77	46.05	10.692	1.218	29.67
Lecture	79	16.38	5.034	.566	

The Table 1 shows that students taught using concept map had a mean score of 46.05 and Standard Deviation of 10.69 while the students taught using lecture method had a mean of 16.38 and standard deviation of 5.03 with a mean difference of 29.67. The mean score of students taught geography using concept map is greater than the mean of the group taught geography using lecture method. This answered the research question number two which sought to establish difference between the mean academic performance of students taught geography using concept map and those taught using traditional method. Students taught using concept map has the highest mean score than the control group.

8.2. Research Question Two

What is the difference between the mean academic performance scores of male and female students taught Geography using concept mapping?

Table 2. Mean and Standard deviation of academic performance of senior secondary school male and female students taught geography using concept map

Group	N	Mean	Standard Deviation	Standard Error of Mean	Mean Difference
Male	44	46.23	11.29	1.702	0.41

Female	33	45.82	10.01	1.742
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The Table 2 shows that the male students taught using concept map had a mean performance score of 46.23 and Standard Deviation of 11.29 while their female counterpart had a mean performance score of 45.82 and standard deviation of 10.01 with a mean difference of 0.41. The mean performance score of male students is slightly greater than the mean performance score of their female counterpart. This answered the research question number five which sought to establish difference between the mean performance score of male and female students taught geography using concept map. The male students taught using concept map has the highest mean score than their female counterpart.

H0: There is no significant difference between the mean academic performance score of geography students taught using concept mapping and those taught using lecture method in secondary schools of Katsina state.

Table 3. t-test analysis of Posttest students' Geography performance in Experimental and Control Groups

Group	N	Mean	Standard Deviation	Mean Difference	t-value	df	p-value	Remark
Concept mapping	77	46.05	10.692	29.67	22.266	154	.010	Sign.
Lecture Method	79	16.38	5.034					

Significant at $P < 0.05$

The Table 3 presented t-test analysis of Posttest students' performance in Experimental and Control Groups. Result shows that the t-value calculated was found to be 22.67 and p-value obtained was 0.00 which is less than 0.05. Therefore, there is significant difference in the mean academic performance of students after treatment. This established significant difference in the mean academic performance scores of students taught geography using concept mapping and those taught with traditional method, in favour of the experimental group. The hypothesis is rejected.

H0: There is no significant difference between the mean academic performance scores of male and female students taught geography using concept mapping in senior secondary schools of Katsina state.

Table 4. t-test analysis of male and female students' Geography academic performance taught using concept mapping

Gender	N	Mean	Standard Deviation	Mean Difference	t-value	df	p-value	Remark
Male	44	46.23	11.291	0.41	0.165	75	.869	Not Sign.
Female	33	45.82	10.005					

*Not Significant at $P < 0.05$

The Table 4 presented t-test analysis of male and female students' academic performance in Experimental Group. Result shows that the t-value calculated was found to be 0.165 and

p-value obtained was 0.869 which is greater than 0.05. Therefore, there is no significant difference in the performance scores of male and female students when concept mapping was used to teach students geography. This means that, concept mapping has equal effect on students irrespective of their gender. The hypothesis is therefore retained.

9. Discussion and Findings

The study investigated the effect of concept mapping technique on academic performance among secondary school geography students. The study revealed that, there is significant difference between the mean academic performance score of geography students taught using concept mapping and those taught using lecture methods with the concept mapping group having significant higher performance. The implication of this finding is that the concept mapping is more effective than the conventional method. The finding is in line with the finding of Ogbonna (2014) that concept mapping methods have statistically significant effect on students' achievement in Organic Chemistry than conventional method. This is possible because concept mapping has been found to facilitate meaningful learning as well as mastering of concepts. Practicing concept mapping leads to a mode of understanding of the concept and the relationship that exist among them noting that the development and understanding of concepts is made easy in learning science subjects. It was conceived that, meaningful learning takes place when learning concepts are hierarchically organized with respect to the level of abstraction, generality and inclusiveness. The use of concept map enables students to learn concepts ranging from simple to complex interconnected concepts progressively. This reason may account for the experimental group performed better than the control group. Another reason may that concept mapping presents concepts in such a way that students sees the relationship between and use one learning experience to understand the new knowledge. This is not so with the lecture method where concept is not presented hierarchically. This is why students taught using concept mapping performed better than the control group.

Other findings of the study are that, there was no significant difference between the mean scores on performance of male and female students taught geography using concept mapping. That is, concept mapping improves students' academic performance irrespective of their gender. These findings confirm the work of Bright, Alex and Peter (2015) which showed that concept mapping approach improved students achievement in mathematics, the method removed gender inequality as both the students performed equally. The reasons for the non-significant difference in the male and female students exposed to concept mapping technique may be due to the fact that both sexes collaborated very well in the process of learning and no gender dominated the class. Another reason could be that all the members of the group worked together as a team to achieve the common goal which had reflected in their performance.

However, the finding contradicts that of Cheema and Mirza (2013) who found that male students taught through concept mapping performed significantly better than the female students. The finding also contradicts that of Otor (2013) that there was also a better performance in favour of female students compared to their male counterparts taught chemistry using concept mapping. The contradiction that exist in the present work and that of Cheema and Mirza (2013) and Otor(2013) may be because of more advance technology that is currently trending the whole world make male students to be more

addicted to technological advancement than their academics. Also it could also be that male students develop negative attitudes to geography as a result of concept mapping. It could be that the male students did not be able to ranking the concepts, clustering the concepts, rearranging concepts into arrays and linking of concepts educationally when exposed to concept mapping.

10. Conclusion

The population of students registering geography in final examinations in secondary schools has not been encouraging despite geography is known to be a bridge subject between science and social science. The major cause of the poor enrolment and performance in the subject has been linked to the use of inappropriate instructional strategies adopted by the geography teachers. However, this study provides an empirical evidence to support the efficiency of concept mapping strategy in teaching. Concept mapping strategy was found to make students explore a wider variety of ideas needed to boost students' learning outcomes. It enhances understanding of content, creative and critical thinking, expression of ideas and information using visual form and making connection in learning geography. Also there was no significant difference in academic performance of male and female in geography taught with the concept mapping technique. Through this instructional strategy, students were able to develop more positive attitude towards learning.

11. Recommendation

Based on the findings of this study, the following are hereby recommended:

1. Geography teachers should always use concept mapping strategy to teach geography concepts so as to help students perform well in the subject.
2. Both male and female students should be taught geography using concept mapping in other to equally help them learn and perform better.
3. Seminars, workshops and conferences should be organized to train teachers in human capacity building to popularize the application of concept mapping strategy, given the fact that this among the recent innovative strategy for teaching and learning in senior secondary schools in Nigeria.
4. Teachers should try to avoid conventional strategy in the teaching learning at this level, since the present study has proved it to be inhibitive to learning outcomes

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