Effect Of Concept Mapping On Peace And Conflict Concepts Attainment And Transfer In Junior Secondary Social Studies In Abia State, Nigeria

Okechukwu Onyinye Nwaubani (Ph.D), Felicia N. Akubue (Ph.D), Adaobiagu Nnemdi Obiagu(M.Ed), Joseph Ifeanyi Chukwuka

Department of Social Science Education, University of Nigeria, Nsukka, Enugu State, Nigeria

Received 23 June 2016; Accepted 18 August 2016; Published 30 August 2016

ABSTRACT

Background: Social Science subjects are indispensable in the smooth running of the society in that they help in proffering solutions to societal problems hence encouraging national development. However, effective teaching and learning in education system requires the use of teaching methods which are learner centred to promote the achievement of educational goals reflected in different school subjects with social science subjects inclusive. Objective: The study sought to determine the effect of Concept Mapping Instructional Strategy (CMIS) on peace and conflict concepts attainment and transfer in junior secondary Social Studies in Umuahia Education Zone, Abia State, Nigeria. Methodology: The study adopted a pre-test, post-test, non-equivalent quasi experimental research design. One hundred and seventy five (175) JSS3 students purposively selected constituted the sample of the study. Two research questions and two null hypotheses guided the study. A 20-item multiple choice Test- Social Studies Concepts Attainment Test (SSCAT) and four (4) essay item test titled Social Studies Transferability Test (SSTT) were developed by the researchers as instruments for the purpose of data collection. Test-retest method was used to determine the reliability coefficient of SSCAT (0.95) and that of SSTT (0.94) using the Pearson's Product Moment Correlation Coefficient statistics. Data collected were analysed using mean and standard deviation to answer the research questions while the two hypotheses were tested using Analysis of Covariance (ANCOVA) at 0.05 level of significance. Results: The findings among others showed that concept mapping instructional strategy is more effective in promoting students’ attainment and transferability of peace and conflict concepts in junior secondary Social Studies than the lecture method. It also revealed that there is significant difference in the mean attainment and transferability in junior secondary school social studies with respect to peace and conflict concepts as a result of exposure to concept mapping instructional strategy. Conclusion: It was concluded that concept mapping instructional strategy is effective in enhancing attainment and transfer of peace and conflict concepts in junior secondary school social studies.

INTRODUCTION

It is generally accepted especially in both official and educational circles that the application of learner-centred instructional strategies in the teaching and learning process can assist in achieving the goals of education which are reflected in different school subjects including social studies. Social studies is a form of education for citizenship or a process of education which aims at developing social skills in citizens to enable them understand and solve social problems [17]. Thus, Social Studies deals with social changes, better future and problem-solving skills [52]. In support of this view, Yusuf [53] posits that Social Studies is a multidisciplinary approach to the study of man in his environment for the purpose of better human relations and effective citizenship. Social Studies therefore is a discipline which is geared towards moulding individuals into citizens who are capable of solving problems and issues confronting their respective environments. This it does by providing and equipping them with requisite skills of inquiry, decision making, problem-solving, thinking- (critical, rational, and reflective, etc) for averting, managing, resolving or transforming problems into satisfactory situations for ultimate peaceful, effective, efficient and happy living in the society.

Social Studies was introduced by the American Government for the purpose of preparing students for effective citizenship in a democratic society. Similarly, the British Government used it for preparing students for their role in the society while Germany (West Germany) used it for developing a new political order after the Second World War. Japan and Thailand employed the use of Social Studies to enable them build a foundation for a democratic society and foster national development. In Botswana Social Studies was entrenched in the school curricula because youngsters needed to learn more about their environment and cultural life [39]. In Nigeria Social Studies was introduced largely to assist youngsters develop the ability to adapt to changing environment, imbibe the spirit of national consciousness and national unity and become good citizens who are capable of contributing to the development of the society [35].

In Nigeria, the contents of junior secondary social studies are structured around themes and concepts on societal problems and issues. The thematic approach is very vital to Social Studies teaching and learning. This is because it utilises integrated contents from relevant social science disciplines such as geography, economics, history, political science, sociology, anthropology etc to assist learners build coherent view or understanding of the environment, its problems and related issues in order to grapple with them effectively [33]. The current Junior secondary school Social Studies curriculum is structured in such a manner that virtually all the themes/concepts have very serious curricula instructional implications especially with respect to problems and issues confronting the contemporary Nigerian society. These curricula instructional issues include “socialisation, culture, social issues and problems family, war issues, national unity and integration, economic issues and even science and technology” (Nwaubani, 2009:274). Thus, a major aim of structuring contents around themes is to ensure that curricula offerings are consistently relevant to societal needs, problems and aspirations [47]. It was also primarily conceived to enable the Nigerian society “meet the challenges of our times now and in the near future” (Universal Basic Education Commission, 2008: 19). One of such numerous contemporary challenges in Nigeria today revolves around peace and conflict issues.

Indeed, findings of some research studies have shown that the goals of the junior secondary school social studies are not only relevant to peace education needs, problems and aspirations of the contemporary Nigerian society but that the subject itself can sufficiently serve as a carrier curricula offering for peace and conflict resolution learning in Nigeria [37,47]. This is largely so because, the recommended themes/contents and activities in the curriculum are capable of promoting experiences and values of democratic participation, sharing, cooperation, tolerance etc which are vital to peaceful co-existence in a multi-ethnic and religious society like Nigeria [2,4]. Peace and conflict are recognisable features of the social and interactive nature of human society which encourage both peace building and conflict situation. Justifiably, both peace and conflict issues are parts of human existence which requires proper management for increased societal progress, stability and development [5,18].

Nigeria has witnessed (and is still witnessing) conflicts of immense destructive and destabilising proportion due largely issues such as mutual suspicions, ethnic antagonism, separatist tendencies, fear, excessive political, economic rivalry and competitions. Other related issues bother on youth restiveness and even general religious intolerance between different Nigerian people and culture [22]. Some of the conflicts include the Zango-Kataf/Hausa ethnic strife (North Central Nigeria), Ife/Modakeke inter-communal crises(South-West Nigeria), Umuleri/Aguleri (South-East Nigeria), Ijaw/Urhobo/Itshekiri and Niger Delta uprising/militancy (South-South, Nigeria), Maitesine Kafachan, Bauchi religious riot and the current Boko Haram insurgency in the North-east of Nigeria [38]. These incidents are beside the fratricidal Nigerian civil war (1967-1970) which threatened the peace, unity, and corporate existence of Nigerian state. Without doubt, these conflicts inflicted monumental
loses on lives and property as well accounted for the stagnation, political instability and even protracted social disharmony of Nigeria [46].

Peace generally perceived is a state of mutual tolerance and harmonious co-existence [42]. It is therefore a state of mutual understanding and cooperative efforts irrespective of some existing differences. This situation suggests that peace is not in absolute terms the absence of war, conflicts or crises but the creation and maintenance of sustainable just order or system through non-violent resolution of conflict [23]. Peace education based on the above refers to both a philosophy and process involving skills of listening, reflection, problem solving, cooperation and conflict resolution [9]. Thus, while the philosophical perspective of peace involves the teaching of the principles of non-violence, trust and compassion, the process dimension focuses on ways of assisting individuals to acquire requisite skills, attitude and knowledge for creating sustaining peaceful environment [21]. Invariably, peace education process is based on building a culture of peace through learning which is in line with the four educational pillars of UNESCO namely “learning to know, learning to do, learning to be and learning to live together”.

Conflict from theoretical perspective is a “struggle over values and claims to scarce status, power and resources in which the aims of the opponents are to neutralize, injure or eliminate their rivals”. Conflict situations therefore usually manifests in different ways, namely war, chaos, disputes, violence etc due largely to misperception, misrepresentations, and poor communication ostensibly over some related socio-economic issues. The issues which therefore characterise conflict situations and managements are feelings of emotions and self esteem, decision making mechanisms and problems of conflicting value interests. In the same vein, Owe identified types of conflict to include intra-personal and inter-personal conflicts which could be attributed to styles of management, social consciousness/awareness and other forms of contractual breaches etc.

However, the extent to which peace and conflict concepts are promoted through social studies depend largely on two related factors namely appropriateness of contents and effectiveness of methodology utilized by teachers. With respect to appropriateness of contents, Nwaubani [37] sought to verify the propiety of junior secondary school Social Studies curriculum in promoting peace education and found out that relevant peace concepts were inadequate, although teachers demonstrated good knowledge and readiness to teach peace and conflict education concepts through the subject. Indeed, how far the above expectations are met depends on teachers’ use of innovative instructional methods and strategies.

Attainment means achievement. It also implies level of accomplishment of a student in a specific task, different forms of tests, assignments and examinations at large. Gray [20] defines academic attainment as the standard of academic attainment, typically shown by test and examination results. It is the accomplishment by the student in either cognitive or psychomotor domain of learning [11]. In the context of this study, attainment means the extent to which a student, teacher or institution has achieved educational goals or the level of actual accomplishment or proficiency one has achieved in an academic area, as opposed to one’s inherent or latent potential. Students’ attainment can be ascertained from their achievement test scores. Test scores here specifically refers to scores (grades) from examinable peace and conflict issues which are derived from current junior secondary school social studies curriculum in Nigeria. Level of responses to questions or test items in selected peace and conflict issues indicate the corresponding level of attainment or academic achievement in social studies especially with respect to the designated contents of the study.

Transfer of learning, is the application of what is learnt or acquired knowledge or skills in different or similar situations. According to Gonzalez transfer is defined as the deployment of content and strategic knowledge stored in long-term memory to solve never-before encountered problems that share structural and conceptual similarities with previous learning. The researcher further states that a critical goal of many school and training interventions is to provide learners with the strategies and foundational knowledge that will allow them to tackle novel problems encountered under circumstances different from the learning situations. Transfer of learning according to Perkins and Salomon [48] occurs when learning in one context or with one set of materials impacts on performance in another context or with other related materials. Transfer of learning could be classified into positive and negative transfers and near and far transfers. Positive transfer occurs when learning in one context enhances a related performance in another context while negative transfer occurs when learning in one context undermines a related performance in another context. Similarly, near transfer include transfer to closely related contexts and performances while far transfer is transfer to rather different contexts and performances. Buttressing on positive transfer, Rebello, Lili, Bennet, Zollman and Ozimek [49] state that, transfer of learning or training is said to be positive when the learning or training carried out in one situation proves helpful to learning in another situation. In other words what is learned in one context enhances learning in a different settings. Examples of such transfer are: the transfer of knowledge and skills related to school mathematics to learning of statistical computation. Transfer of learning could also either be horizontal or vertical. Horizontal transfer occurs when the learner reads-out explicitly provided information from a problem scenario that activates a pre-created knowledge structure that is aligned with the new information read out from the problem; this alignment between the provided information and the learner’s knowledge structure determines whether the learner can solve the problem [49]. Vertical transfer occurs when a learner recognizes features of
the situation that intuitively activates elements of her/his prior knowledge. In this type of transfer the learner typically does not have a preconceived knowledge structure that aligns with the problem information.

It is has been argued that, the degree to which teachers succeed in bringing about desired changes in students’ behaviour depends largely on the quality and effective use of instructional methods, techniques, technology and other devices by teachers in teaching [24]. Thus, Social Studies teachers are expected to use appropriate instructional methods in teaching the subject in order to deepen knowledge in such a way that transfer of learning could be achieved. Mezieobi, Fubah and Mezieobi [29] outlined such possible instructional methods to include inquiry, discussion, problem-solving, dramatization, simulation and questioning, individualized instruction, computer-assisted instruction, programmed instruction, mastery learning instruction, advance organizer instruction, flexible scheduling instruction, team teaching, concept mapping, future wheel, modular instruction and enter-educate instructional methods respectively. Similarly, Akubu [7] identified cognitive strategies, collaborative processes, community-based instruction and peer or cross-age tutoring instructional strategies as having the advantage of actively involving learners in teaching-learning processes in social studies classrooms.

Several studies have showed the efficacy of the above mentioned teaching strategies in the promoting achievement, interest, retention and transfer of learning in different subjects [40,51,8]. These advantages and claims notwithstanding, it is still necessary to determine the efficacy of concept mapping as innovative instructional strategy in achieving meaningful attainment and transfer of peace and conflict concepts in junior secondary school social studies. This is justifiable so because concept mapping is one of the recommended methods for conflict analysis and resolution in social studies learning [36]. The use of concept mapping in the implementation of Social Studies curricula has been suggested by various scholars or researchers because it has the advantage of enhancing critical thinking, retrievability of information, active learning, meaningful learning and transferability of learned values and skills of problem solving. In collaborating this view, Zollman and Robert [54] state that learners can only think critically about contents of subject matter to be learnt if they understood the basic terms and the inherent relationship between associated concepts. Thus, concept mapping ensures a mental building process in the teaching and learning process through drawing concept maps, students can organize, reorganize and assimilate conceptual knowledge they learn and their learning will become meaningful if new concepts are connected to existing ones [13].

Concept Mapping Instructional Strategy (CMIS) is a teaching technique used for externalizing concepts and propositions. It was developed by Novak and his colleagues at Cornell University in 1972 based on the cognitive theories of David Ausubel (meaningful learning theory) which stressed the importance of prior knowledge in order to gain deep learning on new concepts. It is an instructional strategy which falls into the broad family of graphic organizing tools that include mind mapping and spider diagrams [6]. Concept mapping is a strategy employed to develop concept maps. It is an instructional strategy that uses diagrams to present the relationships between concepts. This it does by linking the main concepts with the subordinate concepts in order to enable learners understand the main concepts better. It is used to organize related information or concepts in visual form indicating their relationship. Concept mapping can be used as an instructional tool, assessment tool and a learning tool. The outcomes of a procedure of concept mapping in a particular concept is called a concept map [6].

Concept map is a visual representation of knowledge structure of the concept in a two-dimensional, hierarchical, node-linked diagram that depicts declarative knowledge in succinct graphic form [14]. According to Novak and Canas [36] concept maps are “graphical tools for organizing and representing knowledge”. To them concept maps include concepts closed in circles or boxes of some types and relationships between concepts indicated by connecting or linking two concepts or word on the line, referred to as linking words or linking phrase. Juall and Moyet [26] see concept maps as “education technique that uses diagrams to demonstrate the relation of one concept or situation by linking a central concept to another one in order to assist the learners understand the central concepts better. Albert and Gruneberg note that “concept map consists of a set of nodes representing concepts, objects or actions connected by directional links that define the relationships between and among those nodes.

Although studies have been conducted on the efficacy of concept mapping instruction in social studies, most of them seem to focus on traditional domains of achievement and interest with little or no contribution on transfer of learning. For instance, Chien-Lisun [14] conducted a study on Integrating Information Technology into Instruction and Computer Assisted Concept Mapping in Social Studies in China while Onuoha [15] conducted a study on Influence of School Location on Students’ Achievement in Social Studies using concept mapping as an instructional Strategy. These studies mainly focused on effects of concept mapping instructional strategy on achievement on its own as a combined instructional mode with some corresponding intervening variables such as location and gender. However, they did not emphasize the possible effect of concept mapping on certain unique societal issues such as peace and conflict as well as transfer of learning which constitutes deeper and broader insight into academic achievement. This concern is justified by result of 2009, 2010, 2011 and 2012 Junior Secondary School Examination (JSSE) results in Abia State which showed that 45.6%, 45.3%,
50% and 53% of students who sat for the examinations in Social Studies perform poorly. Studies have also shown that the methods of teaching applied to teaching could have effect on achievement [28,25,44,12]. It is therefore possible that poor performance could be attributed to poor or use of ineffective teaching methods. This justifies the use of concept mapping in teaching some peace and conflict concepts in order to determine level of students’ attainment and transfer of knowledge. This is further justified by the claim that students’ achievement could have positive correlation with their transfer of learning, which is another dependent variable in this study. The present study was more interested in positive, near and horizontal transfer in cognitive aspect of educational taxonomy in peace and conflict concepts of junior secondary school social studies. Its interest was to find out how learning of one context—conflict and conflict resolution could help in solving problems in another context—peace promotion. However, various studies on transfer of learning indicated that the type of teaching environment and strategy used could influence transfer of learning. Michael and Rand [30] found in their study that, hypertext learning environments that present the instructed knowledge by explicitly demonstrating critical interrelationships between abstract and case-specific knowledge components in multiple contexts will help prepare students to use knowledge in new ways and in new situations. Similarly, Belenky and Nokes found out that, engaging students in inventive activities before being shown the correct method is beneficial for transfer, regardless of initial goal orientation. On the contrary, it was found in a study by Murphy and Tyler [32] which investigated the relationship between students’ learning approaches to study on part-time, distance-learning management courses, and transfer of their learning to the workplace that academic grades showed no significant association with transfer of learning. This finding is contrary to existing position that high academic performance leads to high positive transfer of knowledge to problem situations. For instance, Michael [31] investigated the outcome of designed source-text materials in context-based physics learning using validated test questions in Mechanics. The scores from the achievement and transfer tests were correlated and the result showed a moderate correlation between the two sets of scores. This appears to be reliable although there are exceptions to the finding in some cases. These exceptions may be as a result of high achievement occasioned by examination malpractices or rote learning (caused by ineffective teaching) which are part of the problems effective teaching strategies or skills such as concept mapping instructional strategy which is both learner-centred and activity laden could eliminate. This study which is anchored on constructivist, schema and meaningful learning theories therefore sought to determine the effect of concept mapping instructional strategy on students’ attainment and transferability of peace and conflict concepts in Social Studies at the Junior secondary school level in Umuahia education zone, Abia State, Nigeria.

Statement of the Problem:

In recent times Nigeria has witnessed recurring ethnic, communal, religious, ideological, political conflicts which have claimed many lives and properties and by implication threatened directly and indirectly national integration and nation building processes. Efforts made by the Federal Government of Nigeria through the National Youth Service Corps (NYSC), Unity Schools, Federal Character Principle, National sports festivals and cultural exhibitions etc. to ameliorate conflict and propel peace-building seemed to prove inadequate and ineffective. Recently, Peace and Conflict Studies was introduced into the curricula of different levels of education in Nigeria especially at the tertiary level to inculcate peaceful living and ameliorate conflicts. At the secondary school level carrier subjects such as Civic and Social Studies have been used to promote effective and functional citizenship training which hopefully are expected to curb conflict and engender peaceful co-existence in Nigeria. The teaching of Social Studies one major carrier-subject for peace and conflict resolution at the JSS level has been characterised by the use of conventional method such as lecture method which appears to be teacher-centred and is known to make teaching dull, boring and uninteresting especially of not adequately supplemented with learner-centred activities may have been directly or indirectly responsible for poor performance of students in Social Studies. This is shown by the 2009, 2010, 2011 and 2012 Junior Secondary School Examination (JSSE) results. Close analysis of these results showed that 45.6%, 45.3%, 50% and 53% of students who sat for the examinations in the above mentioned years performed poorly. Significant issues addressed by content areas in Junior secondary school Social Studies bother directly or indirectly on peace and conflict problems and issues which currently plague the Nigerian society. Thus, persistent poor performance in junior secondary Social Studies examination by students could be an indication that the subject is not achieving its citizenship education mandate probably due to use of ineffective instructional methods by teachers. It would also appear that poor academic achievement also affects positive transfer of learning especially in solving peace and conflict problems and issues. This lacuna justified the attempt in this study to apply concept mapping instructional strategy in order to find out its possible effect on students’ attainment and transfer of peace and conflict concepts in Social Studies at the Junior secondary level in Umuahia Education Zone, Abia State, Nigeria.

Research Questions:

The following research questions guided the study:
RQ1: What is the difference in mean attainment scores of students in peace and conflict concepts in Social Studies as a result of exposure to concept mapping instructional strategy and lecture method?

RQ2: What is the difference in mean transferability scores of students taught peace and conflict concepts in Social Studies using concept mapping instructional strategy and those taught with lecture method?

Hypotheses:
The following null hypotheses were formulated and tested at probability level of 0.05

H01: There is no significant difference in the mean attainment scores of students exposed to concept mapping instructional strategy and lecture method in peace and conflict concepts in junior secondary school social studies.

H02: There is no significant difference in the mean transferability scores of students exposed to concept mapping instructional strategy and lecture method in peace and conflict concepts in junior secondary school social studies.

Methodology:
Design: A quasi experimental design precisely of non-equivalent group was adopted for the study. This design is mostly used in classroom experiments where the participants already exist in specified and identified groups. The quasi-experimental design was considered most appropriate for this study because it is needless randomizing participants where intact classes exist.

Area of the Study: This study was carried out in two junior secondary schools in Umuahia Education Zone, Abia state. The Education zone consists of four (4) Local Government Areas namely, Umuahia North, Umuahia South, Ikwuano and Umunneochi respectively. It has 53 public secondary schools out of which only 52 offer Social Studies.

Population & Sample: The population for the study consisted of the four thousand three hundred and fifty (4,350) JSS III Social Studies students in Umuahia Education Zone. The choice of JSS III was based on the fact that the topics chosen for the study (which are relevant to peaceful coexistence and conflict resolution) constitute the vital aspects of JSS III Social Studies curriculum. Similarly, JSS III students have also spent at least two years in learning Social Studies at the secondary school level. Therefore, any change instituted by concept mapping will be observable among them. The sample size for the study was one hundred and seventy five (175) JSS III Social Studies students. Purposive sampling technique was used to select the 175 sample size for the study.

Instruments for Data Collection: The main instruments for data collection were the Social Studies Concepts Attainment Test (SSCAT) and Social Studies Concepts Transfer Test (SSCTT) respectively. In addition to these instruments, lesson plans titled “Concept Mapping Instructional Strategy Lesson Plans (CMISLPs) and Lecture Method Lesson Plans (LMLPs) were developed by the researchers and used for teaching the experimental and control groups respectively. The instruments for data collection - SSCAT and SSCTT were validated by three experts drawn from the faculty of education, University of Nigeria, Nsukka (two Social Studies subject specialists and one measurement and evaluation expert). The instruments were pilot tested on 30 research subjects outside the area of the study using test retest method. Pearson product moment correlation coefficient statistics was used to test the correlation coefficient r which yielded 0.95 and 0.94 for the SSAT and SSCTT respectively. These scores showed that both instruments are reliable and could be used for the study.

Experimental Procedure: The researchers organized a two-day training session for the two Social Studies teachers that were involved in the teaching. The aim of the training was to expose teachers to the purpose of the research and familiarize them with the lesson topics as well as the procedure for administering the instrument. This was done in order to ensure instructional homogeneity of instructional situation across all groups. It was also meant to teach them how to use the concept mapping instructional strategy. The two Social Studies teachers in each school, under the supervision of the researchers, taught students with the validated lesson plans and concept maps and the lesson note developed by the researchers. The choice of using the class teachers for the experiment was to control the external validity threat of Hawthorne’s effect in which students react more to newness effect of such newly introduced events like the teacher and teaching method. The researchers however did not show the SSCAT and SSCTT items to the teachers before the date and time they were administered to avoid leakage. The intact classes were assigned control and experimental groups after which the pre-test was administered by the research assistants who were the Social Studies regular teachers trained by the researchers prior to the commencement of the experiment. The experimental treatments involving three lessons lasted for three weeks. The control and experimental groups were taught a lesson per week and at the same period which was 40 minutes per lesson. The post test was administered after the three weeks treatment and the scores obtained were used to answer research questions and test null hypotheses respectively.

Method of Data Analysis: Mean and standard deviation were used to analyse data relevant to research questions. Similarly, hypotheses were tested using analysis of covariance (ANCOVA) at 0.05 level of
significance. The results of this study are presented in tables below based on the research questions and hypotheses that guided the study.

2. Results:

Research Question 1:

What is the difference in mean attainment scores of students in peace and conflict concepts in Social Studies as a result of exposure to concept mapping instructional strategy and lecture method?

Table 1: Mean Analysis Summary Table of the difference between the Mean attainment Scores of Students exposed to peace and conflict concepts in Social Studies using CMIS and Lecture Method

<table>
<thead>
<tr>
<th>Groups</th>
<th>No. of Students</th>
<th>Teaching Method</th>
<th>Pre-test SD</th>
<th>Post-test SD</th>
<th>Mean Gain Score</th>
<th>Mean Gain Score Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>87</td>
<td>CMIS</td>
<td>36.52</td>
<td>6.85</td>
<td>70.10</td>
<td>33.58</td>
</tr>
<tr>
<td>Control</td>
<td>88</td>
<td>Lecture</td>
<td>36.61</td>
<td>6.19</td>
<td>52.85</td>
<td>16.24</td>
</tr>
</tbody>
</table>

The data presented in Table 1 indicate that the experimental group had a mean attainment score of 36.52 and standard deviation of 6.85 in pre-test and a mean attainment score of 70.10 and standard deviation of 11.59 in post-test. Similarly, the control group had a mean attainment score of 36.61 and standard deviation of 6.19 in pre-test and a mean attainment score of 52.85 and standard deviation of 14.34 in post-test. Indicatively, the experimental group had a post-test mean attainment gain score of 33.58 which is higher than the post-test mean attainment gain score of 16.24 by the control group. This implies that concept mapping instructional strategy enhances students’ attainment in peace and conflict concepts in Social Studies more than lecture method. Thus, concept mapping instructional strategy is more efficacious in promoting academic attainments of students in peace and conflict concepts in social studies in junior secondary schools than the lecture method.

Research Question 2:

What is the difference in mean transferability scores of students taught peace and conflict concepts in Social Studies using concept mapping instructional strategy and lecture method?

Table 2: Mean Analysis Summary Table of the difference between the Mean transferability Scores of Students exposed to peace and conflict concepts in Social Studies using CMIS and Lecture Method

<table>
<thead>
<tr>
<th>Groups</th>
<th>No. of Students</th>
<th>Teaching Method</th>
<th>Pre-test SD</th>
<th>Post-test SD</th>
<th>Mean Transferability Score</th>
<th>Mean Transferability Score Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>87</td>
<td>CMIS</td>
<td>22.60</td>
<td>5.59</td>
<td>65.87</td>
<td>43.27</td>
</tr>
<tr>
<td>Control</td>
<td>88</td>
<td>Lecture</td>
<td>23.48</td>
<td>5.44</td>
<td>47.22</td>
<td>23.74</td>
</tr>
</tbody>
</table>

The data presented in Table 2 reveal that the experimental group had a mean transferability score of 26.60 and standard deviation of 5.59 in pre-test and a mean transferability score of 65.87 and standard deviation of 11.23 in post-test. Similarly, the control group had a mean transferability score of 23.48 and standard deviation of 5.44 in pre-test and a mean transferability score of 47.22 and standard deviation of 14.20 in post-test. The experimental group had a post-test mean transferability gain score of 43.27 which is higher than the post-test mean transferability gain score of 23.74 by the control group. This implies that concept mapping instructional strategy enhanced better students’ transferability of peace and conflict concepts in Social Studies than lecture method. Thus, concept mapping instructional strategy (CMIS) is much more effective than lecture method in enhancing transferability of peace and conflict concepts in junior secondary school Social Studies.

Hypothesis 1 (H0):)

There is no significant difference in the mean attainment scores of students exposed to concept mapping instructional strategy (CMIS) and lecture method in peace and conflict concepts in junior secondary school Social Studies.

Table 3: Analysis of Covariance test Summary Table of the Significant difference between the Mean Attainment Scores of Students Exposed to CMIS and those Taught with Lecture Method

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Observed Power*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>19133.862</td>
<td>2</td>
<td>9566.931</td>
<td>70.444</td>
<td>.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>4262.144</td>
<td>1</td>
<td>4262.144</td>
<td>31.384</td>
<td>.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Group</td>
<td>13151.699</td>
<td>1</td>
<td>13151.699</td>
<td>96.840</td>
<td>.000</td>
<td>1.000</td>
</tr>
<tr>
<td>PretestSCAT</td>
<td>6114.153</td>
<td>1</td>
<td>6114.153</td>
<td>45.021</td>
<td>.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Error</td>
<td>23358.995</td>
<td>172</td>
<td>135.808</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>702850.000</td>
<td>175</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The results presented in Table 3 shows that the F-value of the group (Experimental and Control) attainment score is 96.84 with associated probability value of 0.00 which is less than the alpha level of .05 at which the null hypothesis is being tested. Since the probability value of 0.00 of this finding is less than the alpha value of .05 the null hypothesis is rejected. Thus, there is a significant difference in the mean attainment scores of students taught peace and conflict concepts in Social Studies using concept mapping instructional strategy (CMIS) than those taught with lecture method.

**Hypothesis 2 (H02):**

There is no significant difference in the mean transferability scores of students exposed to concept mapping instructional strategy (CMIS) and lecture method in peace and conflict concepts in junior secondary school social studies.

The results presented in Table 4 reveals that the F-value of the group (Experimental and Control) transferability score is 132.00 with associated probability value of 0.00 which is less than the alpha level of .05 at which the null hypothesis is being tested. Since the probability value of 0.00 of this finding is less than the alpha value of .05 the null hypothesis is rejected. Thus, there is a significant difference in the mean transferability scores of students taught peace and conflict concepts in Social Studies using concept mapping instructional strategy (CMIS).

**Discussion:**

The findings of the study showed that concept mapping instructional strategy is more efficacious in promoting academic attainments of students in peace and conflict concepts in Social Studies at the junior secondary school level than the lecture method. It also revealed that there is a significant difference in the mean attainment scores of students taught peace and conflict concepts in Social Studies using concept mapping instructional strategy (CMIS) than those taught with lecture method. These findings are expected because concept mapping instructional strategy is not only innovative in nature but is also characterised by mutual opportunities for students to be actively involved in teaching-learning processes in the classroom. Similarly, CMIS afforded students opportunities to be actively involved through practical activities concept mapping to inherent issues and problems in peace and conflicts in the society. This finding is in agreement with the findings of Onah [44] that students taught with concept mapping performed better than those taught with guided inquiry in Biology. It is also in consonance with the findings of Imoko [25], Ahmed and Alireza, Ali, and Davood respectively which showed in different circumstances that concept mapping instructional strategy is more effective in teaching and learning than conventional methods. On the other hand, the findings are in contrast with the findings of Wang as well as Barchok, Too and Ngeno [10] which posit that concept mapping strategies are not effective in facilitating achievement of different educational objectives. On the whole and with respect to the present study, it could be inferred that students’ attainment is dependent on the innovative and efficacious nature of method of teaching adopted in the teaching learning process.

The findings of the study with respect to transferability of concepts of peace and conflict revealed that concept mapping instructional strategy (CMIS) is more effective in enhancing the transfer of peace and conflict concepts in Social Studies than lecture method. As previously shown in the earlier discussion above, CMIS has promoted a very active and experiential activities which are both practical and symbolic in enhancing storage, remembering and retrieval of information. These qualities probably explain why CMIS was very effective in enhancing of transfer of peace and conflict concepts in Social Studies than lecture method. This finding corresponds with the findings of Michael and Lydia [30] which posit that active representation of graph is a powerful tool in enhancing problem solving skills and attainment of students. It also agrees with the finding of Houdeshell which stresses that concept maps enhanced significantly students’ performance in well structured
transfer activity. It also agrees with the finding of Engle, Nguyen and Mendelson [35] that instructional methods with symbolic and practical activities influence transfer of learning positively. Thus, methods of teaching have remarkable effect on the mean transferability score of students. It could therefore be summarized from the findings of this study that students’ transfer of learning is dependent not only on the method of teaching adopted in the classroom but generally on how and where students are taught as well as the activities they engage in as a result of pedagogical initiatives of the teacher.

**Conclusion:**
This study was largely motivated by the need to determine the effectiveness of CMIS in students’ attainment and transfer in peace and conflict concepts of junior secondary school Social Studies. The findings among other things showed that concept mapping instructional strategy (CMIS) can enhance effectively attainment and transferability of peace and conflict related concepts at Junior secondary school Social Studies. Therefore, Social Studies teachers should be encouraged to use Concept Mapping Instructional Strategy in the teaching of value-laden concepts such as peace and conflicts. This could be done by organizing seminars, workshops, and conferences for Social Studies teachers on how to use CMIS and other learner-centred instructional strategies for better academic attainment and transfer of learning. Government and other stakeholders in education as well as teacher training institutions should provide resources capable of promoting the use of concept mapping and other innovative instructional strategies during the preparation of Social Studies teachers.

**REFERENCES**

33. National Education Research and Development Council (NERDC), 2007. 9-Year basic education curricula in social studies. Abuja: NERDC.