EFFECTS OF COMPUTER ASSISTED INSTRUCTION ON THE TEACHING OF SOCIAL STUDIES EDUCATION IN JUNIOR SECONDARY SCHOOLS IN JIGAWA STATE

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BEING A THESIS SUBMITTED TO THE POST-GRADUATE SCHOOL OF AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS DEGREE IN SOCIAL STUDIES EDUCATION

DEPARTMENT OF ARTS AND SOCIAL SCIENCE EDUCATION, AHMADU BELLO UNIVERSITY, ZARIA

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DECLARATION

I declare that the thesis on "Effects of Computer Assisted Instruction on the teaching of Social Studies Education in Junior Secondary Schools in Jigawa State" was written by me in Social Studies section, under the supervision of Dr. M.C. Ubah and Dr. Sadiq Mohammed. The information derived from series of literature has been duly acknowledged in the text and the list of reference provided. The study was not previously presented for the award of another degree or diploma at any institution.

_____ _____

Umar USMAN Date

CERTIFICATION

This thesis entitled " Effects of Computer Assisted Instruction on the teaching of Social Studies Education in Junior Secondary Schools in Jigawa State " by Umar USMAN meets the requirement governing the award of Masters Degree in Education of Ahmadu Bello University, Zaria and it is approved for its contribution to knowledge and literacy presentation.

_____ _____

Dr. M.C. Ubah — Date
Chairman, Supervisory committee

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Dr. Sadiq Mohammed — Date
Member, Supervisory committee

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Prof. F.S.M. Koya — Date
Ag. Head, Arts and Social Science Education

_____ _____

Prof. A.A. Joshua — Date
Dean, School of Post-Graduate Studies

DEDICATION

This research is dedicated to my parents, especially my father late Mal. Usman Abubakar (May his soul rest in peace). It is also dedicated to my loved wife, Hajiya Habiba, for her support, encouragement and taking charge of the home-front while I was away. I also dedicate the research to my children, Hauwaú, Khadija and Hafsat for their understandings during the course of this programme.

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ABSTRACT

Computer is now an integral part of human life. In other words, it plays significant role in many aspects of human endeavor, like education. The challenge therefore is to be able to remain relevant in the competitive education system through the adoption and use of modern technology (computer). Therefore, the role of computer cannot be over-emphasized. This research work consists of five chapters, which examined the "Effects of Computer Assisted Instruction on the teaching of Social Studies Education in Junior Secondary Schools in Jigawa State". The research design was quasi experimental using a population of 4170 and a sample of 340 students, who were divided into experimental and control groups. Three research questions as well as three null hypotheses were raised for this study. The instrument for data collection titled Computer Assisted Instruction and Social Studies Education Questionnaire was (CAISSQ) was developed by the researcher. The data obtained was analyzed by using t-test and descriptive statistics. The research finding showed that if computers will be used in teaching social studies it will greatly enhance the teaching and learning of the subject more effectively.

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LIST OF ABBREVIATIONS

CAI:	Computer Assisted Instruction
TETFUND:	Tertiary Education Trust Fund
HIV:	Humane Immuno-deficiency Virus
ICT:	Information and Communication Technology
JSS:	Junior Secondary School
MOE:	Ministry of Education
NCC:	National Communication Commission
NECO:	National Examination Council
NIFES:	Nigerian Fellowship of Evangelical Students
NPE:	National Policy on Education
PTA:	Parents – Teachers Association
USAID:	United states Agency for International Development

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Education in the 21st century has simply become dependent on computer as a necessary tool for enhancing teaching and learning, communication and access to information (Mason, 1994). The challenge therefore is to be able to remain relevant in the competitive education system, through the adoption and deployment of modern technology as solutions.

rapidly over the past decade with development in electronics, in research on learning, and in the application of system principles to instruction. Instructional technology helps teachers to make effective use of the vast array of both old and new resources available to them. Modern development cannot thrive without emphasis on science and technology. This explains why Nigeria places premium on education as an instrument for its scientific, technological and economic development.

The National Policy on Education gave prominent place to Social Studies Education within the school curricular, as a core subject area, which all pupils in primary and secondary schools cannot dispense within their learning activities. This perhaps, is in recognition of the potentialities of Social Studies Education to inculcate the right kind of skills and virtues through unified and integrated disciplinary study of man (FGN, 2004).

A critical examination of Social Studies Education objectives, the subject involves many approaches of teaching and learning. It is obvious that lecture method is inadequate to achieve the diverse objectives of the subject (Makinde, 2000).

Therefore, the multi-disciplinary and inter-disciplinary underpinnings of the content of Social Studies Education calls for the application of new dimensions and

orientation in planning and synthesizing of a variety of teaching-learning techniques, such as the use of computers, stimulation technology, role playing techniques, guided discussion and other methods for the purpose of ensuring an attainment of appropriate Social Studies Education objectives.

The Social Studies Education must accept responsibility for involving learners in a variety of classroom activities. These activities should provide opportunity for the learners to practice appropriate behaviour. For example, to learn to think critically and form sound judgement, the learner must practice forming judgment. Thus the use of computer assisted instruction, which is multimedia and pupil/student-centred in nature, as a teaching technique in Social Studies Education, will go a long way to enhancing teaching and learning of the subject (Akinlaye, 1999).

Tancook (2002) supports the view that the integration of internet technology (computers), in the Social Studies Education curriculum will enhance teaching and learning more effectively.

It is against this background that this study attempts to find out whether or not there exist any effects of computer assisted instruction on the teaching of Social Studies Education in Junior Secondary School in Jigawa State.

1.2 Statement of the Problem

Through the researcher's experiences as a classroom teacher in some secondary schools, as well as, observations and discussions among fellow colleagues, the researcher deduced that most teachers in the Junior and Senior Secondary Schools in Jigawa State do not make use of computer as modern teaching aids in the teaching and learning of

Social Studies Education in the classroom. This lukewarm attitude towards the effective use of instructional facilities, most especially the Computer Assisted Instruction (C.A.I), in teaching and learning of Social Studies Education is common to both, the professionally trained Social Studies Education teachers as well as the untrained professional teachers (that is, those without teaching qualification or from other fields other than Social Studies Education).

The desire to embark on this research, therefore, stemmed from the above and the fact that there is the problem of poor performance by Junior Secondary School students in Social Studies Education in the state. These poor performances in Social Studies Education have been recorded for some years by examination bodies and Educational Resource Centre in the state, (Ministry of Education, Jigawa, 2001). It is against this backdrop that this research intends to ascertain or otherwise the effects of Computer Assisted Instruction (C.A.I.) in the teaching and learning of Social Studies Education in Junior Secondary Schools in Jigawa State.

1.3 Objectives of the Study

This study is aimed at investigating the effects of Computer Assisted Instruction in the teaching of Social Studies Education in schools in Jigawa State. Specifically, this study is set out to achieve the following objectives:

i. To find out the effects of computer Assisted Instruction in teaching of Social Studies Education content in Junior Secondary Schools in Jigawa State.

ii. To find out whether or not there is difference in performance between male and female students in Junior Secondary Schools in Jigawa State taught through Computer Assisted technique and those taught using conventional method.

iii. To find out if age has effect on the performance of students that use Computer Assisted Instruction and those who use conventional method in teaching and learning of Social Studies Education Junior Secondary Schools in Jigawa State.

1.4 Research Questions

The researcher will try to provide answers to the following research questions.

i. To what extent does Computer Assisted Instruction have effect on the teaching and learning of Social Studies Education in Junior Secondary Schools in Jigawa State?

ii. To what extent does the use of C.A.I. have effect on the performance of male and female Social Studies Education in Junior Secondary Schools in Jigawa State?

iii. What is the difference in the performance of students in terms of age, of those taught Social Studies Education using Computer Assisted Instruction and those using conventional method in Junior Secondary Schools in Jigawa State?

1.5 Research Hypotheses

The researcher formulated the following null hypotheses to be tested;

i. $Ho_{1:}$ There is no significant difference between the academic performance of students taught with C.A.I. and those taught with traditional teaching methods in Junior Secondary Schools in Jigawa State.

ii. $Ho_{2:}$ There is no significant difference between the academic performance of male and female students taught using C.A.I. in teaching Social Studies Education in Junior Secondary Schools in Jigawa State and those taught with conventional methods.

iii. $Ho_{3:}$ There is no significant difference between the age of students who use Computer Assisted Instruction and those who use non-C.A.I. based instruction in Social Studies Education in Junior Secondary Schools students in Jigawa Stateand their academic performance.

1.6 Significance of the Study

The researcher is one of the teachers who teaches Social Studies Education in Junior Secondary Schools of Jigawa State and understands the usefulness of Computer Assisted Instruction (C.A.I). The researcher, therefore, will among other things help to bring to light a keen awareness of the usefulness of Computer Assisted Instruction (C.A.I) among the teachers in the effective teaching and learning of Social Studies Education .

The outcome of this study will be useful to educational planners so as to enhance planning of Social Studies Education with recommended techniques and strategies of using modern facilities or enhancements in teaching and learning of Social Studies Education in Junior Secondary Schools in Jigawa State.

The study will provide a medium for the State Ministry of Education to consider the relevance of Computer Assisted Instruction (C.A.I) in teaching and learning situation in all subject areas not only Social Studies Education .

This study will help students to understand lessons easier and also learn Social Studies Education concepts better as well as enhancing their better performance during their Junior Secondary School Certificate Examinations.

This research will also serve as a reference material to other researchers who may wish to carry out a similar research on the topic.

1.8 Scope of the Study

This study will also be delimitated to teachers and students of Social Studies Education in Jigawa State Junior Secondary Schools and the use of Computer Assisted Instruction. The study will be limited to the seven (7) Zonal Inspectorates of Education and the State Ministry of Education in Jigawa State Ministry of Education, which are: Dutse Zonal Inspectorate of Education, Birni Kudu Zonal Inspectorate of Education, Hadejia Zonal Inspectorate of Education, Gumel Zonal Inspectorate of Education, and Kafin Hausa Zonal Inspectorate of Education.

CHAPTER TWO

REVIEW OF RELATED LITERATURES

2.1 Introduction

This chapter deals with the review of related literature that are of direct relevance to the study .The researcher will explain the various concepts and also the various variables contained in the study were discussed, that is, computer assisted instruction, its relevance in teaching Social Studies Education and problems affecting its effective usage. They are as follows:

- Theoretical framework
- Meaning of computer
- Definition of Computer Assisted Instruction (C.A.I.)
- Meaning of Social Studies Education in relation to the use of Computer Assisted Instruction (C.A.I.)
- The role of computer in educational development
- Concept of teaching and learning
- Problems of effective use of computer in teaching Social Studies Education
- Solution to the problem of effective use of computer in teaching Social Studies Education
- Review of related empirical studies

2.2 Theoretical framework

A theory is seen as a statement put forward to explain the existence of one or more laws. Yomo {2006} defines a theory as a statement propounded in order to explain a certain phenomenon, which has been tested and confirmed to bring out certain facts.

The theoretical framework of computer Assisted Instruction would be based on the Theory of Information Revolution and the Theory of Knowledge sharing by Huda (2001).

2.2.1 Theory of computer assisted revolution

This is a popular theory and an explanation of contemporary changes occurring around us. That we are in the midst of major revolution in human civilization i.e. a Third Wave {Toffler 1980; Cornish 1996). First there was the Agricultural Revolution, then the Industrial Revolution and now we are in the Information Revolution. It is argued that a shift in the economy and professions is moving from a materialistic and physical reality to a more mental and information reality. Still, information and communication technology and a world wide system of information exchange has been building and growing for over a hundred years and physical technology and industry is not slowing down in growth rather it is accelerating {Kelly 1994; Zey 1993}.

In addition according to London {1987}, since the global economy is increasingly associated with buying and selling information and knowledge and the technology support system for this activity, the traditional education system , i.e. schools, colleges, university, no longer has a monopoly on education. He added that the time of an isolated, insulated and ivory tower educational system is ending.

In view of societies increasingly concern in emphasizing the importance of learning, information and knowledge, the educated person will become more socially respected and revered in the future. According to Drucker {1993}; with emergence of an open systems approach to reality and human society, a broad understanding of the interconnection among different spheres of human life will be essential. The Newtonian

emphasis on analysis, specialization and the compartmentalization of jobs and functions according to him giving way to a wholistic view of life.

According to Drucker {1993}, the Newtonian – Industrial age model of reality emphasized hierarchical control. He added that within the traditional educational system, the teacher was viewed as the authority and center of control of the learning experience. With increase importance and presence of human diversity within the global society and rise of an interactive network view of reality, our model of teaching and learning needs to change. Teachers do not simply recite ideas in the classroom – they think and explore within the classroom and they learn from the students. Students do not simply memorize "truth" – they need to contribute and participate. He said the World Brain/ World Mind system would be highly interactive. In fact, he said if we envision the computer as a teacher, then it will become increasingly personalized, intelligent and interactive with the user- it will not simply provide "data", it will ask questions and guide.

Drucker further said that in the future, the World Brain/ World Mind system will become the central educational system. Education will be techno- activated and highly responsive and flexible to the learner. Learning and teaching will be multi- media and interactive. Entertainment and education will be integrated into entertainment. As both the sender and receiver ends of this technology system become more intelligent, the leaner will increasingly be able to make individualized and informed selections of what he or she needs to learn and the system will become more active in personalizing experience {Halal and Leibowits 1994; Negroponte 1995}.

2.2.2 Theory of knowledge sharing

The computer assisted instruction is all about knowledge sharing. According to Huda {2001}; the exploitation of computing and related technologies for strategic advantage, began in the 70s, however, the strategic opportunities and threats in the late 80's is much of significant, not only because of the rapid advancement of information technology {IT}but also for accompanying education, economic and social change. Thus computer assisted instruction {C.A.I.} has become an important support for many educational strategies. He said as computer networks evolved during the 80's to connect together more people, and they added extra facilities such as computer conferencing, the benefits of using them for communication and knowledge sharing became apparent.

Today, Huda {2001} added that computer assisted instruction {C AI} through the internet provides a very important technology infrastructure for global knowledge networking. But it is more than just computer networks. It is about harnessing knowledge on a global village. He said without effective means of communicating and accessing information, knowledge remains fragmented in small pieces, often in people's head. The same is true between individuals who share common interest but are geographically separated of departments in a large institute. Bringing such knowledge together end the opportunities are huge he conceived.

Huda [2001] added the knowledge economy is significant different to that for which most policy makers were educated and trained. Around the world, the various institutes are trying to grip the new of working that will create frameworks for future prosperity. This he said is not easy as the new economy and its activities rub shoulders with the old. there are tension between established institutions and the "new kids on the block". A concern of many commentators is the gap between the haves and the have –not

– those individuals and societies that participated in the new technology and prosper, and those that do not. He added that this problem is potentially caused in part by unequal access to necessary support services and infrastructures, such as education and internet access. He said for every one who shares in the prosperity brought about by the knowledge revolution new agendas are need.

The knowledge need new competences in using technology and computer Assisted Instruction said Huda(2001}. The present theory of education is the transfer of knowledge from one individual to another, limiting the scope of future interactions with the subjects taught. Emphasis should shift from this concept into a stage where the teacher shows the pupil how to acquire knowledge and tap on the vast network of knowledge through Computer Assisted Instruction.

2. A shift from a one childhood into life- long learning:- Education is the usual process during the formal stages of one's childhood and teenage periods through formal institutes, they become fearful of learning, as they feared the grading system. Now the shift would be from this trend into enabling students to acquire the thrill of learning and transformation into a life long habit.
3. Making Computer Assisted Instruction literacy skill from an early age:- For instance in the old West, children used to ride horses before they learned to walk. In the modern information technology era, children have to learn how to use the computer and other information technology tools before anything else, so that they are prepared for the exponential growth of this sector.
4. Bringing the world of business into the classroom:- building the bridge between formal education and real world has never been so important. Students need to know exactly

what knowledge is need for what situation so that they can be prepared to faces the constant and drastic changes in the corporate world.

Huda [2001] said that education systems are often slow to change. Active partnership with the private sector and other organizations is crucial. Many education establishments achieve this through closer community involvement, such as providing access to their facilities and hosting collaborative education programs. Education systems should reorganize and rearrange themselves to build our future generations more capable of utilizing the global network of information technology for the benefit of mankind, she advocated is crucial through the use of computer assisted instruction.

2.3 Meaning of Computer

One of the definitions of computer drawn from Fanibe (2001) sees, computer as an electronic device that accept data, processes data and send out information. He explains that a computer accepts data through what is called input device. This could be keyboard, joystick, light pen, and mouse.

A computer is "a set of devices which work together to accomplish input, processing and output functions in order to accomplish tasks designed by a user". Thus a computer operates on the basis of input-process-output.

The object 'computer' is defined by NIFES as a device used in processing data. It further describes a computer as a powerful electronic device which has the capacity to accept data as input, apply a series of arithmetic and logic operation on the data, and produce the result of these operations as output information at a very fast speed. Here, three things (components) are obviously namely, (a) input which is the acceptance of

data, (b) process which is the application of a series of arithmetic and logical operations on the data and (c) output which refers to the production of the results of the operation in (b) above.

The Training Centre presents the process diagrammatically thus;

Source: NIFES Computer Training Manual

Dempsey (1972) further defines computer simply as a machine for performing rapid mathematical calculations. Dempsey's know that this definition is too simplistic and so adds that today the word taken to mean an electronic computer, which can perform highly complex calculations quickly and accurately.

Gallo and Neuno (1985) describe computer as basically an electronic machine capable of receiving, storing and manipulating data. The manipulation of data, they call processing, which they maintain, involves computations, sorting, storing and receiving data. They agree that for computer to process data, there must be a way of getting the data into the machine. This way of getting the raw data into the machine is to input it through the keyboard, a typewriter-like device. As mentioned earlier, the result of the input and processing is the output. This process is the same as described by NIFES. The keyboards are invariably the input units.

It is erroneous to think that once the data-item is fed into the computer, the computer would begin to process. There are commands, which can direct the computer on how to process the data. These commands or set of instructions is known as a computer programmes. It is a set of detailed instruction that directs the computer to perform a particular task – when the computer obeys the instructions, it is said to have

executed or run the programme. The results of processing are given back to the operator through what is called an output device, or output unit. Basically, there are three (3) types of computers which are; analogue, digital, and hybrid but the most common one used in education is digital computers.

2.4 Definition of Computer Assisted Instructions (C.A.I)

Bangert-Drown et al (1985), Batey (1986), and Grimes (1987) in their researches came out with definitions thus; Computer Assisted Instructions (C.A.I) is a well known and accepted method of teaching/learning and most often refers to drill and practice, tutorials, or simulation activities offered either by themselves or as supplement to traditional teacher directed instructions.

It is equally defined as an interactive instructional technique in which computer is used to present instructions, materials, monitors learning, select additional instructional materials in accordance with individual needs.

Chimezie (1998) defined Computer Assisted Instructions (C.A.I) as "a teaching process directly involving the computer of instruction in an interactive mode to provide and control the individualized learning environment for each individual student.

Computer based instruction has traditionally been composed of four main component, Bangert-drown (1985).

1) **Drill and Practice:** This was probably the most extensively used Computer Assisted Instructions (C.A.I) application in the early days of educational use of computers. It can be argued that there two main reasons for this; (1) there were comparatively easy to programme which was important as there was little available commercial software

themselves, (2) the programme could show off effectively the capability of the computer and this was important for the computer enthusiast's teacher as this could help to win over colleagues to the course, and hugely result in more money being set on computer in schools. It assumes that concepts, skills, roles or procedures have already been taught to the learner. The pupils are presented with a task of often selected randomly and feedback is offered immediately if it is completed. A well constructed programme of this type should be able to keep pace with the student be offering remedial or advanced level, if and when they become necessary.

Drill and practice programme usual provide different set of question with varied formats. At each stage, the computer asks questions and seeks responses objectively using very repetitive types of procedures. Learners are given the opportunity to try several times before correct answer presented by the computer.

2) **Tutorial:** At this level, the computer acts as the instructor. Tutorial attempt to teach new materials. Subject content is literally "taught" by the learners. The concept and principles and once the learner exhibit clear understanding, he immediately goes over to the next activity. The programme should be able to monitor the student's progress and to present remedial or advanced if when required. the response by the learner is analyzed by the comparison with responses programme writer and appropriate feedback given.

From a practical point of view, the computer tutorial is very limited in its ability to assess classroom situation, when teachers are questions, they can assess the level of understanding of the topic, the degree of comfort with material e.t.c by not only listening to the answers given, but also by observing the speed in which this is given.

3) **Simulations:** Simulations normally model some real life situation and the enable students to manipulate and experiment with it. Simulation according to Heinrich et al (1985) is all abstraction of simplification of real life situation or process. Simulations are becoming increasingly popular for teaching new types of skills; it can create conditions nearly identical to the actual situation. The normal justification for using simulation is that in situation where the real thing is too expensive, too dangerous or too time consuming. For example, students would not normally be able to observe the evolution of a species as it would take too long but the whole process could be observed in a very short period of time on computer simulation. Simulation bridge the gap from abstract knowledge presented in the class to actual performance by letting the students learn different between good and bad decisions.

4) **Problem Solving:** Computer provides logical and sequential order of seeking solution to a problem. These are usually categories of problem solving. One category is usually written programme or another person to assist a learner solve problems. In learner written programmes, a learner defines a problem logically and writes a computer programme to solve a problem. In this instance, the computer carries out the required calculation and/or manipulation to provide the answer to the learner. Thus, the computer assist the learner attain problem solving skills by carrying out complex calculation and manipulations.

Statistical programme can be effective in teaching students about the research. Stewart and Auderich (1991) taught health students information on HIV infection without the context of a unit on statistical computing literature search and modeling health system. Computer and software are bringing about an environment in which mediation effects are as important as in productivity. Word processing provides an environment

conducive to making effective presentation for students learning management concepts. For example, using a spreadsheet gives a sensory presence t data that according to Brinkman (1980) “not only becomes easier but more likely to lead to insight”.

2.5 Meaning Of Social Studies Education In Relation To Use Of Computer Assisted Instructions (C.A.I)

The National Policy on Education (2004) gave a prominent place to Social Studies Education within the school curriculum as a core subject area, which all pupils in primary and secondary schools cannot dispense with in their learning activities. This is, perhaps, in recognition of the potentialities of Social Studies Education for inculcating the right kind of skills and virtues through unified and integrated disciplinary study of man. Social Studies Education is an eclectic – distillation of many disciplines including history, political science, geography, anthropology, economics, philosophy, etc. The epistemology of Social Studies Education is largely conceptualized on the theory of integration of related subjects that stress, in effect, the need to make connection within these disciplines towards understanding of man and his interaction with total environment. This calls for optimum use of Computer Assisted Instruction (C.A.I) which is a rich content and wide coverage.

According to Kissock (1981), Social Studies Education is a programme of study which a society uses to instill in students the knowledge, skills, attitudes, and action it consider important concerning the relationships human being have with each other, their world and themselves. By looking at this definition, the Computer Assisted Instruction (C.A.I) plays the role of instilling the basic skills of reading, calculation and the art of gathering information on the immediate environment and the distance environment.

Famwang (2001) in his own contribution describes Social Studies Education as the study of how science and technology have influenced man, either for good or bad. He elaborates this description by saying that the invention and development of things like the ocean going cargo and aeroplane have enable man to explore and conquer the sea and space respectively, the radio, the television and other modern means of communication have made communication simple and easy and are also used in teaching Social Studies Education concepts.

Social Studies Education is a subject that deals with physical environment and social realities. Akinloye et al (1997) very often, however, we attempt to verbally describe these realities, we do not communicate their true nature and essence to our students with the appropriate Computer Assisted Instruction (C.A.I) however and this is much more easily and effectively done. This is to say, when the teacher uses the right Computer Assisted Instruction (C.A.I) in right manner, at the right time, and in the right place, it can multiply and widen the channel of communication between the teacher and the class. Perhaps, this is best summarized in the quoted Chinese saying:

"What I hear, I forget, what I see, I remember, what I do I understand"

The forgoing statement was reaffirmed by Saunder when he says; you remember 10% of what you hear, you remember 50% of what you hear and see. You remember 90% of what you hear, see and do.

2.6 The Role of Computer in Educational Development

The use of computer in education started in the 1960s, with the advent of convenient personal computers in the 1970. Computers are no longer alien machines. The

computer offers new way of teaching and makes it possible to introduce new practices and emphases into education, possibly the most significant new education tools. The capability of interacting with learners makes computers as powerful tools for enhancing the process of learning.

Akin (1996). Education has always been a tool for achieving individual and national development. In essence, education as a sector in a social and economic system makes the greatest contribution to the social and economic growth of a nation. This statement has its justification in the fact that education deals with the development of human resources. It can be suicide to neglect this aspect of country's potentials of any society. All these stated above can be realized with the use of computer as an instructional material in teaching and learning of Social Studies Education considering the effectiveness and efficiency in delivering. It could be difficult to fully tap and harness other resources for proper utilizations in the process of nation building and development. Modern development cannot thrive without emphasis on science and technology. This explains why Nigeria places premium on education as an instrument for its scientific, technological and economic development.

Computer is now an integral part of human life. In other words, it plays a significant role in many aspects of human endeavour, transportation, communication, national defence, industries, health just to mention but few. Computers are equally important in the field of education. Odili (1988) for example he identified three key areas that computer can play a very significant role in education which include;

i. Administration and guidance.

ii. Objects of instruction where they are involved in preparing students to use computers.

iii. Vehicle for instruction, in that they are used as resource materials.

Further uses are given by the same source. Through computer, the use of ICT in education is on the increase. Therefore, there is e-learning in the classroom and students now learn more on the internet.

Teachers are using computer graphics, CD ROM, video disc and other digital media to convey information to students. They also use computers and multimedia technology to create in class presentation using power point.

Therefore, the role of computer in education cannot be over emphasized. Other roles can be seen in the area of cognitive and psychometric development of students, analyzing student's examination, results and positioning, student's registration, and WAEC/NECO registration.

2.7 Teaching Method

A method is a way of doing something. It is an approach adopted by a teacher to explain subject matter to learners. This approach describes a pattern of teacher's behaviour that occurs sequentially in a unified manner. Teaching method is a general approach to conducting a lesson. That is, the general guideline or manner by which a teacher explains subject matter.

Teaching methods can be perceived as planned activities involved in the presentation of curriculum. In other words, they are ways of bringing learners into contact with subject matter.

Available teaching methods can be arranged in a continuum. At one end of the continuum are expository methods where teaching simply is the transmission of content. At the other end are problem-solving methods where learners are encouraged to examine, investigate and explore subject matter with the teacher acting as a guide.

There are several methods and techniques of teaching Social Studies. Some of these include:

Teaching method	**Teaching techniques**
Presentation	Demonstration, Lecture, Resource Person, Story telling
Construction	Book construction, Exhibition, Model construction, Physical construction
Discussion	Debate, Devil's advocated, Panel, Small group discussion
Dramatic representation	Miming, Playlet, Role-play, Puppetry
Inquiry	Field trip, Survey, Interview, Opinion polls
Simulation	Historical simulation, Simulation games. Simulation activities

Some of these methods would be briefly explained.

i. Discussion method: This method involves sharing thoughts and ideas between teacher and learners or between learners themselves with the teacher coordinating. Usually an issue is focused and the whole class or groups within the class rub minds together to reach a logical and rational conclusion. Discussion activities are successful when participants are fully informed of the issue at stake, avoid

domineering tendencies, listen carefully while others speak and with proper coordination and timing.

A technique for discussion in the class can be organized in form of a debate. The debate technique is used to focus issues with strong negative and positive sides such that discussants can argue for or against the issue.

ii. Dramatic representation method: As a general approach to teaching, this method involves acting situations and events in life to appeal to the varied senses of the learners. The role-play technique in this method involves acting out designed situation. A story is told with a series of events and learners play out the events in the class. The participants assume roles in order to understand an issue of interest to the class. The use of this technique requires no prepared scripts or lines to be memorised. Also, there is no need for rehearsal or special costumes or a stage. Learners simply pretend to be someone else and act out situations based on their experiences.

iii. Inquiry method: This is the central method in Social Studies teaching and learning. To inquire means "to find out". The inquiry method is an approach to instruction to instruction, designed to seek answers to identified problems. It is an organized, well directed search, which takes students out of the classroom in order to examine issues and interpret information. The inquiry class is a seeking, questioning and searching class. The role of the teacher is to initiate the process through skilful questioning to challenge the thinking processes of learners. The learners take the responsibility for their learning by collecting and assessing

information, make inferences, establish relationships and draw conclusions. The inquiry process involves the following steps:

a. The experience
b. State of uncertainty and doubt.
c. Defining and framing the problem.
d. Formulating hypothesis(es)
e. Collection of data or evidencing.
f. Generalizations.

Adoption of this process allows students to discuss and learn through investigation. The survey technique can be used to help learners identify problems and seek rational solutions to them. Survey is simply a fact-finding exercise that sends learners out of the classroom to collect information on a specific topic.

2.8 Problems of Use of Computer in Teaching and Learning of Social Studies Education

There are several obstacles to the effective use of computers in teaching Social Studies Education as cited by Barde in Okam (2002). These include:

1) Lack of Skills

Nigeria does not only lack information infrastructures, it also lacks the human skills and knowledge to fully integrate computers into Social Studies Education education. To use computers in our secondary schools in Nigeria, the need for locally trained workers to install, maintain and support these systems cannot be over emphasized. There is acute

shortage of trained personnel in application software, operating system network administration and local technicians to service and repair computer facilities.

In Nigeria, also most secondary school teachers lack the skill to fully utilize technology in curriculum implementation hence the traditional chalk and duster approach still dominate in secondary school pedagogy, Okebukola, (1991).

2) Lack of Relevant Software

Is another major problem, inadequate relevant software is a major bottleneck obstructing wider application of the computer. This is in line as rightly observed by Solomon, (1989), that there is a great discrepancy between relevant software supply and demand in developing countries like Nigeria, because the ultimate power of technology is the content and communication (software).

3) Cost

The price of computer and Information Communication Technology (ICT) related services is expensive while the chalk board and other non electronic instructional materials which are cheaper. Nigeria has over 6,000 public secondary schools; majority of the schools suffer from shortage of classroom blocks and only few are equipped. Some of the schools cannot afford the exorbitant internet connection, USAIDS (2005).

4) Low Power Supply

A formidable obstacle to use computer is irregular power supply. Computer equipment was made to function with other infrastructures such as electricity. For the past fifteen years, Nigeria has been facing difficulty in providing stable and reliable electricity supply, Nwoji (2002).

5) Time Consuming

Time easily passes out when the teacher and the students are operating the computer especially; to them who do not know much about it, time silently elude them without doing much operation, Salisu, (2003).

6) Limited Access to the Internet

In Nigeria, there are few internet providers that provide internet gateway services to Nigeria. Such internet providers are made up of Nigerians who are in partnership with foreign Information and Communication Companies. Many of these companies provide poor services to the customers who are often exploited and defrauded, NCC (2006).

2.9 Solution to the Problem for the Effective Use Computer in teaching Social Studies Education

Many problems were identified as bedeviling the use of computer in teaching of Social Studies Education in schools. These problems can be solved as follows as state by Egbute, (2002).

1) The government should endevour to make adequate funding for the mass purchase of computers to secondary schools.
2) Training and retraining of teachers should be a continuous process, so that a large number of qualified computer literate teachers can be produced to effectively teach the subject (Social Studies Education) through Computer Assisted Instrument (C.A.I).
3) Provision of adequate infrastructure such as electricity, computer rooms for the proper operating and keeping of the computers.

4) Nigeria should join the world link of development (world), a programme initiated by the World Bank in 1977. This programme has been establishing computer laboratories and bringing internet connectivity to schools in developing countries around the world.
5) Government and donor agencies should enhance internet connectivity so that computer can effectively be used to enhance teaching and learning of Social Studies Education in our schools.
6) All Secondary Schools should be encouraged to establish a mini computer room so that the students would have access to learn how to use computer.
7) Principal of Secondary Schools should embark on the acquisition of relevant teaching material e.g. computers through education donor agencies such as British Council Education Trust Fund (ETF), Ford Foundation, Parent Teachers Association (PTA).
8) Government should insist to make use of computers in teaching compulsory ethnics in all subject areas. This was rightly advocated by Balagun (1988).

2.10 Review of Related Empirical Studies

Several studies in the use of instructional materials have indicated more profitable than the use of only methods of teaching. This research made efforts to review previous studies on the use of computer in teaching and learning of Social Studies Education but unfortunately such literatures are not in abundance. In a bid to ascertain this, the researcher reviewed previous studies in the use of computer and other instructional materials in the teaching and learning of Social Studies Education.

Kola (2007) carried out a research study title "The Use of Instructional Materials for Teaching of Physics Education in Pategi Local Government in Kwara State". The purpose of the study was to find out on the effectiveness of teaching physics education

using instructional materials in Pategi local government area of Kwara State. The study was a survey type; the target population was six hundred and sixty respondents who were selected by the used of simple random sampling technique. 20 physics teachers were used. Four null hypotheses were formulated which were subjected to a statistical test with the use of the chi-square statistical tool at 0.8 level of significance and all the four null hypotheses were rejected for the study.

The result showed that about 90% of the respondents made use of instructional materials appropriately and they had positive effects on the respondents in physics education in Kwara State, Nigeria. The research findings showed that the teacher preparation and the correct usage of instructional materials had positively improved on the students' performance in physics education in Pategi local government area in Kwara State.

The present study is similar in title to that of Kola (2007), because it deals with "The effects of Using Computer Assisted Instruction in Teaching Social Studies Education in Junior Secondary School of Jigawa State". The present study is different from that of Kola (2007) because the research work used only twenty physics teachers while in the present research 73 Social Studies Education teachers were sampled for the study. The present study also differed from the previous because the present study have a specified level i.e. junior secondary school students level was not clearly stated in the previous research work.

In location also, the two researches differs with the previous in Kwara state and the present in Jigawa state though all in Nigeria. The present study is similar to the previous research study because the two researches all formulated and tested four null

hypotheses for their studies. Though, the past researcher made use of chi-square to test the hypotheses, the present researcher will make use of the t-test statistical tool at 0.05 level of significance to test the four null hypotheses.

Ishaya and Thankgah (2002) conducted their research study on the "Effect of Using Instructional Materials on Academic Performance of Junior Secondary School Students in the Teaching of Social Studies Education in Jalingo Local Government Area of Taraba State". The target populations used were fourteen senior secondary schools. Out of these, 10 schools were selected as the sample by the use of the simple random sampling method. Two hundred and forty senior secondary school, student of junior secondary school; three offering Social Studies Education were used as the sample size. Five null hypotheses were postulated and where tested using the Spearman Rank order correlation coefficient test statistics at 0.05 level of significance. All the five null hypotheses stated were accepted. The result showed that 85% of the respondents in the study population did not fully make use of instructional materials in the teaching of Social Studies Education to their students in the Jalingo local government area in Taraba state which adversely affected the performance of students in Social Studies Education subject.

The present study is similar to the previous study in title but the two studies are different in their location while the previous study was carried out in Taraba state, the present study is done in Jigawa state. Five null hypotheses were stated in the previous study and four null hypotheses are stated for the ongoing research study. The present researcher study was tested using the t-test while the past study was tested using the analysis of variance (ANOVA) statistical tools at 5% level of significance. The previous

study had junior secondary school students just like the present study. The previous study made use of sample size of two hundred and forty students while the ongoing research has a sample of five hundred and four (504) students.

Uyagu (2009) carried out a research study titled “Effect of Instructional Material Usage and Teacher’s Quality on Student’s Academic Performance in Science Area in Kaduna State”. The target population was fifteen thousand four hundred and thirty (15430) senior secondary school students from twenty-four secondary schools in Zaria local government area and one thousand and thirty-three (1033) teachers. A sample of eighty (80) students was randomly chosen for the study and nine (9) teachers. Three hypotheses were formulated to guide the study. A one sample t-test statistical tool was used in testing the null hypotheses at 0.05 level of significance. The findings revealed that students performed better when appropriate instructional materials were made available and utilized in teaching science and teachers possessing good qualification enhance the performance of students in science.

The present study is similar to the past because both emphasized on the use of instructional materials in teaching were computer is an instructional materials. The target population in the present study is one thousand eight hundred and forty-two (1842) Social Studies Education student and seventy three Social Studies Education teachers while the previous study got a target population of fifteen thousand four hundred and thirty junior secondary school students from twenty-four secondary school in Zaria in Kaduna state and with one thousand and thirty-three teachers.

Suleiman (2006) carried out a research titled “Effects of Instructional Materials on Student’s Performance in Geography in selected Secondary Schools in Wamako Local

Government Area of Sokoto State". The target population was fourteen secondary schools out of which eight secondary schools were randomly selected to form the sample by the use of simple random sampling technique. Three null hypotheses were stated using the correlation coefficient test of statistics at 0.05 level of significance, and all three null hypotheses were accepted. The results showed that about 75% of the respondents did not appropriately make use of the instructional materials in teaching which had a negative impact on the student's performance in geography in secondary schools in Wamako local government area of Sokoto state, Nigeria.

The present study is similar to the previous since all the researchers are interested on the effects of instructional materials (computer) in teaching and learning though the two study differed in subject areas, the previous study was in the field of geography while the present study is on the "Effect of Using Computer Assisted Instruction in Teaching Social Studies Education in Junior Secondary Schools out of which 21 secondary schools were selected as sample size, compared to fourteen secondary schools that served as the target population in the previous research study out of which eight schools were selected as the sample size. Four null hypotheses were tested stated in the present research study which was in all tested using the chi-square test statistics at 5% level of significance compared to the three null hypotheses stated in the past study and were tested at 0.8 level of significance. The present study is located in secondary school in Jigawa State, Nigeria, while the previous study was conducted in Sokoto state all in the North West Zone of Nigeria.

Summary

The importance of Social Studies Education cannot be over emphasized. Dubey et al in Ololobou (2010) described Social Studies Education as the investigation of human activities. It studies men at home, work, in politics, in the nation and everywhere he engages in his busy programme of living.

Therefore, through Social Studies Education, man is equipped with useful knowledge, skills, positive values and attitudes to be sufficiently informed to tackle societal problems.

The review has also provided some insight on the need for teachers to go for retraining in order to update their knowledge on computer and computer related technology, the teaching of Social Studies Education in our schools and colleges, Social Studies Education teachers should be encouraged to acquire computer education. This will go a long way in assisting them to develop a programmed instruction in Social Studies Education lesson. The review has also provided insight into cases that are similar to the present study in order to buttress the point the researcher has in mind.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter deals with the research design and methodology under the following sub-headings: Research Design, Population for the Study, Sample Size and Sampling Procedure, Instrument for Data Collection, Validation of the Research Instrument, Pilot Study, Reliability of the Research Instrument, Procedure for Data Collection and Procedure for Data Analysis.

3.2 Research Design

The research design for this study was the quasi experimental design. The choice of this design is to give a detailed result of the state of affairs at a given period using test items as the instrument for data collection. The choice of the design is also guided by the fact that the study aimed at investigating effect of two methods of teaching and learning on students' academic performance.

3.3 Population for the Study

There are three senatorial zones in Jigawa state with seven Zonal Inspectorates of Education. The three senatorial zones in Jigawa state are: Hadejia, Gumel, and Dutse Central. These senatorial zones consists of seven (7) Zonal Inspectorates of Education in Jigawa State as follows: Birnin Kudu, Hadejia, Gumel, Ringim, Dutse, Kazaure and Kafin Hausa, with Hadeja zone having 48 Junior Secondary Schools, Dutse zone with 46 Junior Secondary Schools; Gumel zone with 48 Junior Secondary Schools; Kazaure with 50 Junior Secondary Schools, while Birnin Kudu have 35 and Ringim zone having 40 Junior Secondary Schools respectively.

The total population for the study was all the 4170 final year Junior Secondary School students, who are studying Social Studies Education in the (304) Junior Secondary Schools that make up the study area of the seven Zonal Inspectorate of Education in the state.

Table 3.1: Population for the Study

Zonal Inspectorate	No. of schools	No. of school teachers	No. of Students

Hadejia	40	14	445
Dutse	46	16	520
Gumel	48	20	675
Kazaure	50	20	1110
Ringim	40	14	420
Birnin Kudu	35	11	350
Kafin Hausa	40	12	650
Total	**304**	**107**	**4170**

Source: *Department of Planning Research and Statistics. Jigawa State Universal Basic Education Board, Jigawa (2011).*

3.4 Sample Size and Sampling Procedure

Twenty-One Junior Secondary Schools were randomly selected to represent the junior secondary schools from the three senatorial zones that constitute the study area of the seven Zonal Inspectorates of Education in Jigawa state, using 'Hat drawn method' of random sampling. Three Junior Secondary Schools were randomly chosen from each of the seven Zonal Inspectorates of Education in the state using the hat drawn method. The sample of students for the study was randomly selected from the twenty-one (21) Junior Secondary Schools. The sample was three hundred and fifty-one (351) students based on an approved sample size table (The Research Advisors, 2006). The selection process paid attention to the personal variables of the students.

In sampling the students, the researcher sought the request for the comprehensive list of the Junior Secondary Schools three students offering Social Studies Education from the schools. The researcher then assigned numbers to this list of the students as

given by the assistance of the Social Studies Education teachers. This gave a total of three hundred and fifty-one respondents that were selected in the Junior Secondary Schools of the three senatorial zones in Jigawa State. The students were further divided into control and experimental groups, as presented in Table 3.2 below:

Table 3.2: Sample Size for the Study

Variable	**Frequency**		**Total**
	Male	**Female**	
Group	Control (170)		Experimental (170)
Gender	Male (103)		Female (57)
Average age	12-13 (87)		14-15 (83)

3.5 Instruments for Data Collection

The researcher used an adopted test instrument for placement examinations by the Ministry of Education, Jigawa State for 2011. The researcher used the Pre-Test and Post-Test as a method of collecting data from the students while questionnaire (Computer Assisted Instruction and teaching of Social Studies Education Questionnaire – CAISSQ) was used to obtain data from the teachers. However, the Pre-Test was to test the students' entry behaviour in relation to certain Social Studies Education Concepts. The results were marked and scored (100%). The Post-Test was the accuracy/capability test which was used to test the level of mastery of some selected Social Studies Education Concepts taught with the aid of Computer Assisted Instruction and otherwise. The marking scheme for the test was also designed for easy assessment.

3.5.1 Validity of the Research Instrument

In order to make sure that the final copy of the questionnaire – CAISSQ is valid for the study, the researcher gave it to the experts in the department of education Social Studies Education section, after writing the questionnaire for correction so as to ensure the face and content validity of the structured questions before administering to the respondents.

3.5.2 Reliability of the instrument

The data collected from the pilot study were statistically analyzed to determine the reliability coefficient. The Spearman Rank reliability coefficient and Guttmann option of the split half techniques were used. The result gave a reliability coefficient of 0.84 alpha levels and a standard alpha level of 0.91. These reliability coefficients were considered adequate for the internal consistencies of the measuring instrument. This was obtained in a confirmation test of reliability coefficient of Spiegel and Stevens (1999). An instrument is considered reliable if it is between 0 and 1, and the closer the calculated reliability coefficient is to one, the more reliable is the instrument. This as such confirmed the reliability of the data collection instrument used as fit for the main work.

3.6 Procedures for Data Collection

The researcher visited the selected Junior Secondary Schools and administered the instrument with the assistance of Social Studies Education subject teachers to the students who have been initially randomly divided into two equal halves in each of the schools. One group was the Experimental Group and the other Control Group. The experimental group was involved in teaching for one month with the use of instructional

materials that are computer assistance-oriented. The control group was taught for one month respectively without the use of computer assistance-oriented instructional materials. Before each test, there was an interval of one week to enable the students to adequately prepare. The students (i.e. the experimental group) were exposed to Treatment after the conduct of the Pre-test.

The administration of the Pre-test and Post-test was carried out in the various schools with the assistance of the Social Studies Education subject teachers. The tests was collated, marked and sorted out for proper analysis.

3.7 Statistical Analysis Procedure

The researcher assessed the completed tasks given to both the Control and Experimental Groups to determine the effectiveness or ineffectiveness of the Computer Assistance-Oriented instructional materials in the teaching of Social Studies Education concepts as well as the effect of the Treatment given. In addition, the research hypotheses were tested using the T-Test at the significant level of 0.05. However, if the calculated value is greater than the critical value, the null hypotheses were rejected, while if the calculated value is less than the critical value, the null hypotheses were accepted. The formular for T-Test is Calculated $t < 1.96$, calculated $p>0.05$.

CHAPTER FOUR
RESULTS AND DISCUSSIONS

4.1 Introduction

The aim of this research was to investigate the effects of computer assisted instructional (CAI) in teaching Social Studies Education in junior secondary schools in Jigawa state. This chapter dealt with the data analysis, results and discussion. The data analysis was based on the questionnaire drawn for 340 students and 100 teachers from twenty-one junior secondary schools. A total of 170 students were tested on Computer Assisted Instruction (CAI) used as experimental group and another 170 students as the control group. The first section presents the bio-data variables distribution in frequencies and percentages of the teachers and students respondents, while the second section tested the research hypotheses as well as provided answers to research questions. All hypotheses are tested at 0.05 alpha level of significance.

4.2.0 Data Presentation

4.2.1 Distribution of respondents according to their bio data variables.

Table 4.1: Distribution of Teacher respondents by Gender

Gender	Frequency	Percentage (%)
Male	75	75
Female	25	25
Total	**100**	**100**

According to the table above, there were 75 male teachers while the rest 25 representing 25.0% are female teachers in Social Studies Education.

Table 4.2.: Distribution of Teacher respondents by Age

Age	Frequency	Percentage (%)

18-25	13	13
26-35	33	33
36 & above	54	54
Total	**100**	**100**

According to the table above on the age distribution of the teacher respondents, 13 (13.0%) of them are between 18 – 25 years as against 33 (33.0%) others that are between 216 – 35 years and the rest 54 representing 54.0% were 36 years and above.

Table 4.3: Distribution of Teacher respondents by Qualification

Qualification	Frequency	Percentage (%)
DIPLOMA	19	19
NCE	54	54
B.ED	21	21
M.ED/M.SC	2	2
OTHERS	4	4
Total	**100**	**100**

Details above revealed the academic qualification of the teachers' respondents. A total of 19 (196.0%) of the teachers are Diploma holders while 54 (54.0%) others have NCE as against 21 (21.0%) have BED certificates while 2 (2.0%) have MSC certificate. the rest 4 (4.0%) have other forms of academic qualifications.

Table 4.4: Distribution of Teacher respondents by Marital status

Marital Status	Frequency	Percentage (%)
Single	25	25
Married	70	70
Divorced	5	5
Total	**100**	**100**

According to the table above there are 25 (25.0%) single teachers, while 70 (70.0%) others are married and the rest 5 (5.0%) of the teachers are divorced.

Table 4.5: Distribution of Teacher respondents by Location

Location	Frequency	Percentage (%)
Rural	40	40
Urban	60	60
Total	**100**	**100**

The table above showed that 60 of the teachers representing 60.0% are teaching in urban locations while the rest 40 (40.0%) are teachers sampled from rural locations.

4.3 Research Questions

Research question one: What is teachers perception on the availability of Computer Assisted Instruction (CAI) in the teaching of Social Studies Education in secondary schools on account of location.

Table 4.6: Teachers perception on the availability of Computer Assisted Instruction (CAI) in the teaching of Social Studies Education in Secondary schools on account of location.

S/no	Items	Location	Response categories		MEAN	Std. Dev	Std.Err
			A	D			
3	Adequate computer laboratories	Rural	3	37	1.9500	.7143	.1129
		Urban	48	12	3.4267	.9968	.1286
4	Adequate computer for practical	Rural	16	24	2.3250	.6155	.0973
		Urban	42	18	3.0667	1.1329	.1412
5	Adequate overhead projectors	Rural	8	32	2.2000	.7578	.1198
		Urban	35	25	2.7167	.9758	.1259
6	Adequate software for teaching Social Studies Education	Rural	8	32	2.1250	.8223	.1300
		Urban	45	15	3.0833	1.0299	.1329
7	Adequate internet connectivity	Rural	15	25	2.7000	.0734	.1121
		Urban	40	20	2.8167	.9295	.1200
8	Power supply	Rural	-	40	1.3000	.4641	.0733
		Urban	45	15	3.000	1.0576	.1365
9	Standby generators	Rural	40	38	1.900	.6324	.0051
		Urban	33	27	2.9167	1.1393	.1410

Details above revealed the perception of teachers on the availability of Computer assisted instructional materials in rural and urban secondary schools. The urban teachers highest mean response of 3.4267 on the adequate computer laboratories, as against mean response of 1.9500 of urban secondary schools. Details showed that while 48 (80%) agreed that there are availability of CAI materials in schools as against 12 (20%) that said these CAI materials are not available in urban schools, only 3(7%) agreed that there are availability of CAI materials as against 33 (93%) that disagreed on the availability of CAI materials in rural secondary schools. The table showed that in all the items of CAI materials, they are more available in urban secondary schools than in rural areas except

standby generators that are more available in rural schools than in urban secondary schools. .

Research question Two: What is teachers' perception on the community resources suitable for computer assisted instructional materials in teaching Social Studies Education

Table 4.7: Teachers' perception on the community resources suitable for computer assisted instructional materials in teaching Social Studies Education

S/no	Items	Response categories		MEAN	Std.dev	Std.Err
		A	D			
10	Adequate computer resource persons	51	46	2.6100	.8979	.0897
11	Adequate computer resource centres	35	59	2.4100	.8772	.0877
12	Adequate teachers with computer literacy	39	61	2.4600	.9991	.0999
13	Adequate classrooms	48	52	2.6400	.0571	.0765
14	Adequate office accommodations for computer instructors	27	73	1.9100	1.1109	.1110
15	Adequate teachers computer assisted instructional storage systems	51	49	2.8300	1.1464	.1146

According to the above table adequate teachers for computer assisted instructional storage systems is the most suitable resources for computer assisted instructional materials in teaching Social Studies Education. This item attracted the highest mean response of 2.8300 with detail of response showing that while 51 (51%) agreed on this item, the rest 49 (49%) of the teachers respondents disagreed with this item.

Research question Three: What is teachers' perception on the impact of computer in their teaching Social Studies Education in their schools?

Table 4.8: Teachers on the impact of computer in their teaching Social Studies Education, in their schools

S/no	Items	Response categories	MEAN	Std.dev	Std.Err

		A	D			
16	Help the development of skills	63	37	2.9400	1.0807	.1080
17	Aids retention and free flow of interaction	58	42	2.6400	1.0002	.1002
18	Encourages thinking and creativity	64	36	2.8500	1.1492	.1149
19	Prevent boredom and fatigue	57	33	2.6100	.9836	.0983
20	Save time in verbal explanation	63	27	3.0400	.9735	.0973

According to the table above, the highest mean response of 3.0400 is that the greatest impact of computer in their teaching Social Studies Education in their schools is that it saves time in verbal explanation. Details showed that 40 of them strongly agreed, while 33 others disagreed, 18 disagreed and the rest 9 strongly disagreed.

4.3 Hypotheses Testing

Hypothesis One ($H0_1$): This null hypothesis state that there is no significant difference on the account of performance in Social Studies Education of students taught through traditional method and those taught by CAI. in secondary schools

Table 4.9: Independent t-test sample statistics on difference in the performance in Social Studies Education of students taught through traditional method and those taught by CAI. in secondary schools

Variable	Group	N	Mean	Std. Dev.	Std. Error	Df	t-cal	t-crit	Sig (p)
Performance score in Social Studies Education	Traditional method (Control Group)	170	44.77	13.9462	1.0696	338	2.281	1.960	.023
	CAI (Experimental Group)	170	48.20	13.7252	1.0565				

Calculated t >1.96, calculated p<0.05

Results of the independent t-test statistics on the performance of students who are exposed to Computer Assisted Instruction (CAI) and those taught on traditional method revealed significant difference between the two groups. Reason being that the calculated p value of 0.023 is less than the 0.05 alpha level of significance while the t-calculated value of 2.281 is greater than the t-critical value of 1.96, at df of 338. This implied that the null hypothesis which states that there is no significant difference in performance between students taught traditional method and those taught with CAI was rejected.

Hypothesis Two ($H0_2$): This null hypothesis state that there is no significant difference in the performance of Social Studies Education students exposed to CAI on account of their gender.

Table 4.10: Independent t-test sample statistics on gender difference in the performance in Social Studies Education of students taught by CAI. in secondary schools

Variable	Group	N	Mean	Std. Dev.	Std. Error	Df	t-cal	t-crit	Sig (p)
Performance score in Social Studies Education of CAI	Male	103	49.4466	13.9021	1.3698	168	1.468	1.960	.144
	Female	67	46.2836	13.4556	1.6438				

Calculated t < 1.96, calculated p>0.05

Results of the independent t-test statistics showed that there is no significant difference in the performance of Social Studies Education between male and female secondary students exposed to CAI on. reason being that the calculated p value of .144 is greater than the 0.05 alpha level of significance while the t-calculated value of 1.468 is less than the t-critical value of 1.96, at df 168. This implies that the null hypothesis which states that there is no significant difference in performance taught with CAI on account of their sex is hereby accepted and retained.

Hypothesis Three ($H0_3$): This null hypothesis state that there is no significant difference between the age of students who use CAI and those who use non-CAI based instruction in Social Studies Education in Junior Secondary Schools students in Jigawa State and their academic performance.

Table 4.10: Independent t-test sample statistics on age difference in the performance in Social Studies Education of students using CAI and those who use non-CAI.

Variable	Group	N	Mean	Std. Dev.	Std. Error	Df	t-cal	t-crit	Sig (p)

Performance score in Social Studies Education	12-13	87	28.5000	7.9871	1.2628	168	17.023	1.960	.000
	14-15	83	54.2618	8.4821	.7439				

Calculated t >1.96, calculated p<0.05

The above table shows the results of the independent t-test statistics on the performance of students who are exposed to Computer assisted instruction (CAI) in average age of junior secondary schools. This is because the calculated p value of 0.000 is less than the 0.05 alpha level of significance while the t-calculated value of 17.023 is greater than the t-critical value of 1.96, at df 168. This implies that the null hypothesis which states that there is no significant difference between the age of students who use Computer Assisted Instruction and those who use non-C.A.I. based instruction in Social Studies Education in Junior Secondary Schools students in Jigawa State and their academic performance is hereby rejected.

4.4 Discussion of Findings

The analysis of the data collected for this study provided insight into the main objectives of the study, which was to unearth the effects of Computer Assisted Instruction in the teaching of Social Studies Education in Junior Secondary Schools in Jigawa State.

The result of hypotheses testing revealed that most of the experimental group performed better in the test compared to the control group. On this ground, the null hypothesis one which states that there is no significant difference between the academic performance of students taught with C.A.I. and those taught with traditional teaching

methods in Junior Secondary Schools in Jigawa State was rejected at 0.05 level of significance. This therefore, means that students that were taught using Computer Assisted Instruction performed better than those taught with conventional methods. This finding is in agreement with the views of Ishaya and Thankgah (2002) who conducted their research study on the "Effect of Using Instructional Materials on Academic Performance of Junior Secondary School Students in the Teaching of Social Studies Education in Jalingo Local Government Area of Taraba State". The result showed that 85% of the respondents in the study population did not fully make use of instructional materials in the teaching of Social Studies Education to their students in the Jalingo local government area in Taraba state which adversely affected the performance of students in Social Studies Education subject. To buttress this, Uyagu (2009) who carried out a research study titled "Effect of Instructional Material Usage and Teacher's Quality on Student's Academic Performance in Science Area in Kaduna State" in his findings revealed that students performed better when appropriate instructional materials were made available and utilized in teaching science and teachers possessing good qualification enhance the performance of students in science.

Research question two indicated that male students had a higher mean performance than the female students in the use of Computer Assisted Instruction in Social Studies Education concepts. However, the t-calculated is less than the t-critical. This implies that the null hypothesis which stated that there is no significant difference between the academic performance of male and female students taught using C.A.I. in teaching Social Studies Education in Junior Secondary Schools in Jigawa State and those

taught with conventional methods is hereby accepted. This means that gender is not an impending factor for the use of C.A.I.

Furthermore, significant difference was established between the age of students who use Computer Assisted Instruction and those who use non-C.A.I. based instruction in Social Studies Education in Junior Secondary Schools students in Jigawa State and their academic performance. Therefore, the null hypothesis which states that there is no significant difference between the age of students who use Computer Assisted Instruction and those who use non-C.A.I. based instruction in Social Studies Education in Junior Secondary Schools students in Jigawa State and their academic performance was rejected at 0.05 level of significance.

In summary, two of the hypotheses (hypotheses 1 and 3) raised for this study were rejected at a significance level of 0.05 while hypothesis two was upheld.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This research work consists of five chapters which are summarized as follows:

Chapter one is the introductory part and discussed about the dependence on computer as a teaching and learning device in the 21st century. It also discussed the importance of Social Studies Education in school curriculum as it inculcates the right skills and values as well as discipline to the citizen. Statement of the problem (the effects

of computer assisted instruction in teaching) was discussed in this chapter. The chapter also stated the objectives to be achieved in using computer assisted instruction. These include encouraging teaching –learning process as well as motivating students to remain in class. The chapter also discussed the research questions and hypothesis set to be proved for the effectiveness of using computer as a teaching –learning tool. Basic assumptions, significance and scope of the study were also discussed in this chapter.

Chapter two is the literature review. This studied past researches that are to be used as the basis for this research. The areas as summarized as follows: Conceptual definition of computer; Conceptual definition of Computer Assisted Instruction (C.A.I.); Definition of Social Studies Education in relation to the use of Computer Assisted Instruction (C.A.I.); the role of computer in educational development; Problems of effective use of computer in teaching Social Studies Education ; Solution to the problem of effective use of computer in teaching Social Studies Education ; Review of related empirical studies and finally the summary.

Chapter three is the research methodology part of the project. It dealt with the research design and methodology under the following sub-headings: Research Design, Population for the Study, Sample Size and Sampling Procedure, Instrument for Data Collection, Validation of the Research Instrument, Pilot Study, Reliability of the Research Instrument, Procedure for Data Collection and Procedure for Data Analysis.

Chapter four is the data analysis part of the study. It analyzed the responses of individual question answered in the questionnaires distributed to teachers of Social Studies Education teachers in various schools. The chapter also analyzed the practical methods used by the researcher in his attempt to find out the effectiveness of using

computer in teaching Social Studies Education. In this chapter the teacher used controlled group and experimental group. In the controlled group, he taught the group throughout using the traditional method, while in the experimental group he first taught the group using traditional method and then using computers and recorded his results as analyzed in this chapter.

5.2 Summary of major findings of the study

The following are the major findings of the study:

1. Students taught with the computer Assisted Instructions (CAI) had significantly higher performance in their Social Studies Education than their counterparts that were taught with traditional method.
2. There are higher availability of Computer assisted instructional (CAI) materials in urban located secondary schools than in rural located junior secondary schools in Jigawa state.
3. There is no significant difference in the performance of Social Studies Education between male and female secondary students exposed to CAI in Secondary schools in Jigawa state.
4. Significant difference exists in teachers' perception on the availability of Computer Assisted Instruction (CAI) materials between urban and rural secondary schools in Jigawa state.

5. There is no significant difference in the perception of teachers on the impact of computer in the teaching of Social Studies Education in secondary schools on account of the teachers educational qualification.

5.3 Conclusions

The following conclusions can be deduced from the study:

Students taught with Computer Assisted Instructions (CAI) had higher academic performances than those taught with traditional method.

Most schools in rural areas have no computers compared to their counterparts in the urban centres in Jigawa state.

All the teachers irrespective of their academic qualification are of high support for the use of Computer Assisted Instructional (CAI) materials in the teaching of Social Studies Education in Jigawa state.

In essence, the effective use of Computer Assisted Instruction was found to be essential for better teaching, mastery and understanding Social Studies Education concepts by Social Studies Education students in junior secondary schools in Jigawa state. This is because students tend to perform better when Computer Assisted Instruction (CAI) is used in teaching than when traditional methods are used.

Thus, the ineffective or lack of utilizing Computer Assisted Instruction (CAI) by teachers of Social Studies Education will lead to producing Social Studies Education graduates who are not well grounded with the necessary knowledge and skills with which to face current social challenges that the society expect them to help and conquer.

5.4 Recommendations

Based on the findings of this study, the following recommendations were made:

i. The Jigawa state Ministry of Education should provide adequate computers and computer software packages for teaching Social Studies Education concepts to students of junior secondary schools.

ii. Since Computer Assisted Instruction (CAI) was found to help in improving the performance of Social Studies Education students in understanding the subject matter, its effective and efficient use should be emphasized.

iii. The use of Computer Assisted Instruction (CAI) should be intensified by Social Studies Education teachers so as to motivate learners' interest towards the subject.

iv. Social Studies Education teachers who are not computer literates should be sponsored to undergo computer programmes so as to increase their efficiency.

v. The government should provide adequate computers to the rural junior secondary schools so as to improve the performance of their students.

5.5 Contribution to Knowledge

This research work has contributed to knowledge in the following ways:

1. That Computer Assisted Instruction is effective than using traditional teaching methods in the teaching of Social Studies concepts among Junior Secondary School Students of Social Studies in Jigawa State.

2. That there are inadequate computer facilities for effective teaching and learning of Social Studies Education and other subjects in rural Junior Secondary Schools in Jigawa State.

5.6 Suggestions for Further Studies

Research in the area of using Computer Assisted Instruction in the teaching of Social Studies Education is an all-pervading phenomenon. Even though the outcome of the research shows a general positive opinion on the effects of using Computer Assisted Instruction in the teaching and learning of Social Studies Education in Junior Secondary Schools in Jigawa State, one cannot give a blanket conclusion, whether the same situation is applicable to other states of the Federation, since Nigeria is currently made-up of thirty-six (36) states. It will therefore be interesting if similar studies are replicated in other states of the federation for the purpose of assessing the effectiveness or otherwise of using Computer Assisted Instruction in the teaching of Social Studies Education in such states so that the relevant stakeholders concerned can take note and put in efforts where necessary.

Other areas suggested for further research include the following:

1. An appraisal of the effectiveness of using Computer Assisted Instruction in the teaching of Social Studies Education concepts among students of selected institutions of higher learning in Nigeria.

2. Effects of using Computer Assisted Instruction in the teaching of Social Studies Education on the academic performance of NCE Social Studies Education students in some selected Colleges of Education.

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APPENDIX 1

Teachers' opinion on the effects of computer assisted instruction in teaching Social Studies

Education Questionnaire

Section A: Personal Data

Instruction: Tick the most appropriate answer.

1. Sex: (a) male ☐ (b) female ☐
2. Age

(a) 25 - 30yrs ☐

(b) 31-44yrs ☐

(c) 45 yrs and above ☐

3. Marital status

a. single ☐

b. married ☐

c. Others ☐

4. Qualification

a. Diploma ☐

b. N.C.E ☐

c. B. Ed ☐

d. M. Ed ☐

e. Others ☐

5. COMPUTER RELATED KNOWLEDGE

Have you attended any course in computer?

A. Yes ☐ B. No. ☐

6. Are there computers in your school?

A. Yes ☐ B. No. ☐

7. Have you ever instructed your student using computers?

A. Yes ☐ B. No. ☐

Motivational factors of computer assisted instruction

8. How may students were in the class when applying traditional method of teaching out of the total number in the register?_____

9. How many was the number when applying computer as the instructional device ?_____

10. Did you ever attempted to compare your method of instructions (Traditional and Computer) methods of instructions ?

A. Yes ☐ B. No. ☐

11. How did you carried out the process?

A. I taught the same group with both the traditional and computer method ☐

B. I divided the students into control and experimental groups ☐

C. Others ☐

12. State the number of students involved in the control and experimental groups_____

13. How many students were there in each group?

14. At the end of your evaluation, how many students passed the test when you employed traditional method? State experimental group_____ control group_____

15. When you employed computer method of instruction, how many students passed the test? State experimental group_____ control group_____

APPENDIX II

STUDENTS' PRE-TEST AND POST-TEST INSTRUMENT

SOCIAL STUDIES CONCEPT MASTERY

1. _____ and _____ are two types of transportation systems in the world.
2. Two means of transportation are _____ and _____.
3. Ship is to _____ transportation while aeroplane is to _____ transportation.
4. _____ is the fastest means of transportation.
5. The cheapest means of transportation is _____.
6. _____ and _____ has affected the means of transportation used in the world.
7. Human trafficking means _____.
8. _____ and _____ are the most affected by human trafficking.
9. The factors responsible for human trafficking include _____ and _____.
10. a. Human trafficking affects people in the following ways _____ and _____.

b. Human trafficking can be prevented through _____.

MARKING SCHEME FOR PRE-TEST AND POST-TEST

1. i. Road transportation
   ii. Air transportation
   iii. Water transportation
   iv. Rail transportation
2. i. Cars
   ii. Trucks
   iii. Lorries
   iv. Aeroplane
   v. Trains
   vi. Ship
   vii. Canoe
   viii. Helicopter
   ix. Ferry boat
   x. Tankers
3. i. Water
   ii. Air
4. Air
5. Rail
6. i. Science

ii. Technology

7. Persons and children

8. i. Children

ii. Women

9. i. Poverty

ii. Greediness

iii. Ignorance

iv. Broken Homes

v. Child abuse

10. A. i. Physical ii. Psychological iii. Social

B. i. Public enlightenment ii. Education iii. Advocacy

iv. Legislation

APPENDIX III

Required Sample Size†

Population Size	Confidence = 95% Margin of Error				Confidence = 99% Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
300,000,000	384	784	1537	9603	663	1354	2654	16586