UNIVERSITY OF CAPE COAST

AVAILABILTY AND UTILISATION OF INFORMATION AND COMMUNICATION TECHNOLOGY FACILITIES IN TEACHING SOCIAL STUDIES IN PUBLIC SENIOR HIGH SCHOOLS IN SEKONDI-TAKORADI METROPOLIS

MAGNUS ACQUAH-DOUGHAN

2015

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BY

MAGNUS ACQUAH-DOUGHAN

Thesis submitted to the Department of Arts and Social Sciences Education of the College of Education Studies, University of Cape Coast, in partial fulfilment of the requirements for award of Master of Philosophy Degree in Curriculum Studies

JULY 2015

DECLARATION

Candidate's Declaration

I hereby declare that this is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature: …… …. Date: ……..

Name: Magnus Acquah-Doughan

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature:…… Date:……

Name: Prof. Kankam Boadu

Co-supervisor's Signature:…….... Date: ……

Name: Dr. Awo Abena Sarpong

ABSTRACT

The main objective of this study was to assess availability and utilization of ICT facilities in teaching of social studies in the Sekondi-Takoradi Metropolis. The descriptive research design was adopted for the study. A census technique was used for the 100 social studies teachers. The questionnaire was used to gather the requisite data for the study. The data were analysed through the computation of descriptive and inferential statistics such as frequencies, percentages, mean of mean distributions and independent sample t-test.

The study among other things found out that ICT facilities are available for teaching and learning social studies in the public senior high schools of Sekondi-Takoradi. Also, the study revealed that social studies teachers in the Sekondi-Takoradi public senior high schools use ICT facilities in teaching the subject. Again, the study showed that social studies teacher has positive perception towards the use of ICT facilities in the teaching of social studies.

The study recommended that based on the population of the schools, the schools should find ways of increasing the number of ICT facilities. This would enable the teachers and students to increase the number of days and hours spent using the ICT facilities. With the numerous benefits of the use of ICT facilities to both teachers and students, it is recommended that teachers continue to use ICT facilities during instructional periods. Follow-up support should be provided by the Ghana Education Service in the schools. This must include in-service education and training on the use of ICT for the teachers in the school and discussion of the implications of the use of ICT in teaching and learning.

ACKNOWLEDGMENTS

I first expressed my profound gratitude to my dynamic and hardworking supervisor, Prof. Kankam Boadu and Dr. Awo Abena Sarpong for their promptness in reading and making necessary comments for the successful completion of this work. My thanks also go to my entire family who in diverse ways have contributed to the successful completion of this work. I also thank, Ike Oscar Acquah-Doughan, Adelaide Yanney, Mr. and Mrs. Macsimpney, Christina Appah, Evelyn Anyan and Edmond Kwesi Agormedah for their encouragement and support throughout this work. I am grateful to Mr. Isaac Atta Kwenin for helping me to organise this work.

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DEDICATION

To my mother Gladys Owusu and the Doughan Family.

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CHAPTER ONE

INTRODUCTION

This chapter is the introductory section of the study which presents the background of the study, statement of the problem, purpose of the study, research questions, significance of the study, delimitations and limitations of the study and the organisation of the rest of the study.

Background to the Study

The rapid development in Information Communication and Technologies (ICTs) has made tremendous changes in the twenty-first century, as well as affected the demands of modern societies. Recognizing the impact of new technologies on the workplace and everyday life, today's educational institutions try to restructure their educational programs and classroom facilities in order to minimize the teaching and learning technology gap between developed and the developing countries. This restructuring process is providing learners with knowledge of specific subject areas, to promote meaningful learning and to enhance professional productivity (Tomei, 2005).

The field of education has been affected by ICTs, which have undoubtedly affected teaching, learning and research (Yusuf, 2005). ICTs have the potential to accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create

economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change (Davis & Tearle, 1999; Lemke & Coughlin, 1998; cited by Yusuf, 2005). In a rapidly changing world, basic education is essential for an individual be able to access and apply information. Such ability must include ICTs in the global village.

Conventional teaching has emphasized content. For many years course have been written around textbooks. Teachers have taught through lectures and presentations interspersed with tutorials and learning activities designed to consolidate and rehearse the content. Contemporary settings are now favouring curricula that promote competency and performance. Curricula are starting to emphasize capabilities and to be concerned more with how the information will be used than with what the information is. Contemporary ICTs are able to provide strong support for all these requirements and there are now many outstanding examples of world class settings for competency and performance-based curricula that make sound use of the affordances of these technologies (Oliver, 2000).

ICTs are making dynamic changes in society. They are influencing all aspects of life. The influences are felt more and more at schools. Because ICTs provide both students and teachers with more opportunities in adapting learning and teaching to individual needs, society is forcing schools to aptly respond to this technical innovation. Tinio (2002), states the potentials of ICTs in increasing access and improving relevance and quality of education in developing countries. Tinio further States the potentials of ICT as follows:

> ICTs greatly facilitate the acquisition and absorption of knowledge, offering developing countries unprecedented

> opportunities to enhance educational systems, improve policy formulation and execution, and widen the range of opportunities for business and the poor. One of the greatest hardships endured by the poor, and by many others, who live in the poorest countries, in their sense of isolation, and ICTs can open access to knowledge in ways unimaginable not long ago (p. 6).

In Watson's (2002) description, ICTs have revolutionized the way people work today and are now transforming education systems. As a result, if schools train children in yesterday's skills and technologies they may not be effective and fit in tomorrow's world. This is a sufficient reason for ICTs to win global recognition and attention. For instance, ICTs are dependable tools in facilitating the attainment of one of the Millennium Development Goals (MDGs), which is achievement of universal primary education by the year 2015. Kofi Anan, the former United Nations Secretary General, points out that in order to attain the goal of Universal Primary Education by the year 2015; we must ensure that information and communication technologies (ICTs) unlock the door of education systems. This indicates the growing demand and increasingly important place that (ICTs) could receive in education. Since ICTs provide greater opportunity for students and teachers to adjust learning and teaching to individual needs, society is, forcing schools to give appropriate response to this technical innovation.

ICT, according to United Nations Development Programme [UNDP] (2006) report, has been defined to include the full range of electronic technologies and techniques to manage information and knowledge. It is about

computer-based technology including computer hardware, software, CD-ROM, videodisc player and the internet. These forms of technology provide teachers and students with vast quantities of information in an easily accessible, non-sequential format that can be used as teaching tools.

It has been touted as potentially powerful enabling tool for educational change and reform. When used appropriately, ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality and also help make teaching and learning active process connected to real life. Hakkarainen, Ilomaki, Lipponen, Muukkonen and Rahikainen (2000) point out that ICT is a transformative tool and its full integration into the school system is necessary to prepare students for the information society they will inherit.

Studies including Hadley and Sheingold (1992) and Hannafin and Savenye (1993) have indicated that ICT has the potential for enhancing student learning. On the part of teachers, they use ICT particularly, computers to write lesson plans, prepare materials for teaching, record and calculate student grades, and communicate with students and other teachers. As such, computers have become a routine tool for helping teachers accomplish their professional work (Becker, Ravitz & Wong, 1999).

Extolling the importance of ICT in the instructional process, Chapin and Messick (1992) assert that the role of ICT in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education policy. To this extent, Ghana has made legislative provisions on the imperative use of ICT in the instructional process. Consequently, there has been a staggering amount of research related to the

use of ICT for educational purposes in these developed nations. The use of ICT in the classroom teaching-learning is very important for it provides opportunities for teachers and students to operate, store, manipulate, and retrieve information, encourage independent and active learning, and self-responsibility for learning such as distance learning, motivate teachers and students to continue using learning outside school hours, plan and prepare lessons and design materials such as course content delivery and facilitate sharing of resources, expertise and advice.

This versatile instrument has the capability not only of engaging students in instructional activities to increase their learning, but of helping them to solve complex problems to enhance their cognitive skills (Jonassen & Reeves, 1996). Several studies argue that the use of new technologies in the classroom is essential for providing opportunities for students to learn to operate in an information age. It is evident, as Yelland (2001) argued that traditional educational environments do not seem to be suitable for preparing learners to function or be productive in the workplaces of today's society. She claimed that organizations that do not incorporate the use of new technologies in institutions cannot seriously claim to prepare their students for life in the twenty-first century.

Grimus (2000) pointed out that “by teaching ICT skills in educational institutions the students are prepared to face future developments based on proper understanding” (p. 362). Similarly, Bransford, Brown & Cocking (2000) reported that “what is now known about learning provides important guide lines for uses of technology that can help students and teachers develop the competencies needed for the twenty-first century” (p. 206). ICT originally

is applied to serve as a means of improving efficiency in the educational process (Romi, 2000).

Furthermore, it has been shown that the use of ICT in education can help improve memory retention, increase motivation and generally deepens understanding (Dede, 1998). ICT can also be used to promote collaborative learning, including role playing, group problem solving activities and articulated projects (Forcheri & Molfino, 2000). ICT allow the establishment of rich network of interconnections and relations between individuals (Rifkin, 2000).

The fundamental factors influencing the use of ICT in teaching-learning have been identified by researchers. Rogers (2003) identified five technological characteristics or attributes that influence on decision to adopt an innovation. Stockdill and Morehouse (1992) also identified user characteristics, content characteristics, technological considerations, and organisational capacity as factors influencing ICT adoption and integration into teaching. Teachers' integration of ICT into teaching is also influenced by organizational factors, attitudes towards technology and other factors (Chen, 2008; Tondeur, Valcke & Van Braak, 2008; Lim & Chai, 2008; Clausen, 2007). Sherry and Gibson (2002) claim that technological, individual, organizational, and institutional factors should be considered when examining ICT adoption and integration.

The teaching of social studies can be greatly enhanced by the use of ICT as the following examples illustrate, composing, documenting and presentation. Producing reports using ICT tools in social studies, history, geography or economics topics is highly motivational for students. Students

enjoy adding graphics photographs, pictures and other information about a topic to reports they write and presentations they make. A whole range of graphical information, including diagrams, photographs and other pictures is readily available on the internet. Other information can be researched using the internet. The internet is the interconnection of computer network world-wide and its realisation can be considered the greatest achievement in the recent years (Otoja & Otoja, 2012).

According to Mclean, Turban and Wetherbe (1996) the use of ICT has made the world a global village. It allows information to be passed from one network and communication media to another in digital packet to report, to give context to topic discussed in the curriculum and to make classroom learning more closely approximate to what occur in the work place. Materials that could aid creativity in social studies can be accessed on the internet easily in the world. In the similar manner difficulty of social studies students acquiring print materials can be reduced in a minimal for they can easily browse this information on the internet. It aids students in gathering vital information on certain school subjects/topics of interest.

From the early 1990s, education stakeholders in Ghana have been concerned about how teachers and students use Information and Communication Technology (ICT) in schools and how their use supports learning. In 2004, the Parliament of Ghana passed into law Ghana's ICT for Accelerated Development (ICT4AD) policy, which is currently at various stages of implementation (Mangesi, 2007). This policy represents the vision of Ghana in the information age and addresses 14 priority focus areas including accelerating human resource development and promoting ICT in education

(Ministry of Education, 2008). Their use is also underlined by Organisation for Economic Corporation and Development [OECD] (2009) as a necessity for improving quality in teaching and learning.

In this regard, ICT used for teaching and learning began to receive governments' attention in the past decade. The ICT in Education Policy of Ghana requires the use of ICT for teaching and learning at all levels of the education system. This commitment is demonstrated by the adoption of the ICT in Education Policy in 2008 which sought to introduce ICTs into teaching and learning in all tertiary, secondary and basic schools across the country. Attempts have been made by the Ministry of Education [MOE] to support institutions in teaching of ICT literacy. Efforts are gradually being made to provide educational institutions with the use of ICT facilities and to encourage ICT as an integral component of the educational process so as to meet the demands and challenges of globalisation. Most secondary, and some basic, schools have computers laboratories (Mereku, Yidana, Hordzi, Tete-Mensah & Williams, 2009). The Ministry of Education/ Ghana Education Service [MOE/GES] has also made huge investments in the hope of attaining the goal of improving the quality of education through enriching the learning environment with the help of educational software and technologies.

Ghana now regards the mastering of the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy. At every level of education, ICT is perceived as a vehicle for curriculum enhancement. Blurton (2002) defines ICT as "a diverse set of technological tools and resources used for creating, storing, managing and communicating information" (p. 46). These technologies include computers and their

associated peripherals, software, the internet and broadcasting technologies. Pernia (2008) defines ICT as technologies used to communicate in order to create, manage and distribute information. She adds that a broad definition of ICTs includes computers, the internet, telephone, television, radio and audio-visual equipment. She further explains that ICT is any device and application used to access, manage, integrate, evaluate, create and communicate information and knowledge. Digital technology is included in this definition as services and applications used for communication and information processing functions associated with these devices (Amara, 2006).

The use of ICTs in Ghanaian schools and African countries is generally increasing and dramatically growing. However, while there is a great deal of knowledge about how ICTs are being diffused and used in high schools in developed countries, there is not much information on how ICTs are being used by teachers and students in Ghanaian schools. There is also an assumption that there are wide gaps in the use of ICTs between rural and urban schools (Aduwa-Ogiegbaen & Iyamu, 2005).

Adubifa (2001) underscored the relevance of evaluating the state and use of ICT when he articulated that "each institution must be able to assess its current situation with regard to its capacity to use ICT in teaching and learning, research outreach and professional services, as well as to achieve administrative efficiency" (p. 6).

The teacher is often the most important factor in the successful integration of ICT into the school's instructional practices and curriculum. Generally, it is believed that without a well-trained teacher who is knowledgeable and skilled in ICT, changes in the teaching-learning process

and widespread effective uses of technology in learning are not likely to occur. The policy makers and stakeholders of education in Ghana expected that the introduction of ICT into formal education settings would improve the academic performance of teachers by encouraging them to improve their ability to use and apply during instructional process. Training Programmes, conferences and seminars have been organized for teachers to access ICT in every circumstance (MoE, 2008). Furthermore, in-service training opportunities for many teachers in different subject areas have been provided. It was hoped that teachers' use of technology in education would improve educational outcomes, increase technological skills and reduce anxiety when preparing lessons.

In fact, Woodrow (1992) asserts that any successful transformation in educational practice requires the development of positive user attitude towards new technology. The development of teachers' positive attitudes towards ICT is very significant factor not only for increasing computer integration but also for avoiding teachers' resistance to ICT use (Watson, 2002).

In Ghana, as ICT use is emerging in schools, the need to have teachers with competencies in ICT is indispensable. According to Janssens-Bevernage, Cornille and Mwaniki (2005), as computer hardware and software become available to an increasing number of schools, more attention needs to be given to the capacity building of the key transformers in this process, teachers. The emergence of ICT in schools gives credence to the urgent need to give due attention to the teacher (both the professional teachers and the teacher trainees) with respect to the development of their ICT core skills and capabilities needed for their job. This among other reasons such as the

underutilised ICT equipment in the schools because of teachers' incompetence in ICT, and the numerous merits that ICT in education avails are some of the likely reasons that informed the government and policy makers of Ghana to introduce ICT into the curricula of schools including the colleges of education.

The nagging questions about all these good intentions by policy makers are, how prepared, how ready, and resourced are the colleges of education vis-à-vis the availability of critical success factors such as, ICT hardware and infrastructure, software, communication equipment, curriculum, textbooks and ICT-competent tutors to enable this noble vision see the light? This study, therefore, aimed at evaluating the availability and utilization of ICT facilities in teaching social studies in public SHS in Sekondi-Takoradi Metropolis.

Statement of the Problem

A lot of efforts and numerous resolutions have been made by policy makers concerning Information and Communication Technology (ICT) to make teaching and learning easier. For example, in the Anamuah-Mensah Committee's Report (Government of Ghana, 2004) it is stated that, "it is important for students in the senior high schools to be exposed to ICT through the use of computers and that ICT should be introduced into the country's education system starting from the junior high school and upward". The committee recommended that ICT should be integrated into the curriculum and should be used in the teaching and learning process.

The use of ICT in education has the potential to enhance the quality of teaching and learning, the research productivity of teachers and students, and the management and effectiveness of institutions (Kashorda, Waema, Omosa

& Kyalo, 2007). However, opportunities for realizing the benefits of using ICT in education face a number of challenges in the developing countries. Access to ICT facilities is a major challenge facing most African countries.

A recent study on pedagogical integration of ICTs from 2009-2011 in 10 Ghanaian schools indicates that there is a gap between the policy directives and actual practices in schools (Mereku & Yidana, 2011).

In Ghana, a study was conducted by Adebi-Caesar (2012) on assessment of ICT situation in Senior High Schools in the Lower Manya Krobo District. Teachers were asked whether they have sufficient computers and resources. The study revealed that 97.9% of the teachers in all the schools had insufficient computers and resources and only 2.1% agreed they had enough computers. Again when teachers were questioned whether they use computers in their school 90.7% responded they never made use of computers in their school and only 9.3% agreed they made use of them.

My search, through the available literature has not found any empirical study on availability and utilization of ICT facilities in teaching social studies in Public Senior High Schools in the Sekondi-Takoradi Metropolis. Therefore, the present study sought to investigate the availability and utilization of ICT facilities in teaching social studies in public Senior High Schools in Sekondi-Takoradi Metropolis.

Purpose of the Study

The general purpose of the study is to evaluate the availability and utilization of ICT facilities in teaching social studies in public SHS in Sekondi-Takoradi Metropolis. Specifically, the study sought to:

1. examine the availability of ICT facilities in teaching social studies in public Senior High Schools in Sekondi-Takoradi Metropolis.
2. investigate how social studies teachers' use ICT facilities in teaching social studies in public Senior High Schools in Sekondi-Takoradi Metropolis.
3. assess teachers' perception of the use of ICT facilities in teaching of social studies in public Senior High Schools in Sekondi-Takoradi Metropolis.
4. evaluate teachers' factors (knowledge, competencies, age, teaching experience, and availability of ICT resource) that influence the use of ICT facilities in teaching of social studies in public Senior High Schools in Sekondi-Takoradi Metropolis.
5. investigate the challenges social studies teachers face in the use of ICT facilities in teaching social studies in public Senior High Schools in Sekondi-Takoradi Metropolis.

Research Questions

The following questions were asked to address the research problem:

1. What are the available ICT facilities for teaching social studies in public Senior High Schools in Sekondi-Takoradi Metropolis?
2. How are the available ICT facilities used in teaching social studies in public Senior High Schools in Sekondi-Takoradi Metropolis?
3. What are the perceptions of teachers towards the use of ICT facilities in the teaching of social studies in public Senior High Schools in Sekondi-Takoradi Metropolis?
4. What impact do teacher factors (knowledge, competencies, teaching experience, and availability of ICT resource) have on the use of ICT in the

teaching of social studies in public Senior High Schools in Sekondi-Takoradi Metropolis?

5. What are the challenges social studies teachers face in the use of ICT facilities in teaching social studies in public Senior High Schools in Sekondi-Takoradi Metropolis?

Hypothesis

Ho There is no significant difference in male and female teachers' perception on the use of ICT in the teaching of social studies in the Senior High Schools of Sekondi -Takoradi Metropolis.

Significance of the Study

This research study has the potential to contribute to existing research in relation to the availability and utilization of the ICT facilities in the teaching of social studies. This research is expected to benefit educators by extending the knowledge base that exists already, as it presents empirical evidence in relation to these availability and utilization. It will also benefit researchers by adding to the pool of information that already exists in this area. Researchers can therefore fall back on information gathered here by replicating this study in another setting.

The schools' administration will be informed of the state of ICT equipment for teachers' use for teaching and learning, whether they are adequate or in deficit. Students in Sekondi –Takoradi Metropolis and other schools also stand to benefit from the findings of the study.

This study may help to raise awareness among Policymakers, Directors of Education, Headmasters and teachers, about the perception of teachers towards ICT utilization and the teachers' factors that influence ICT utilization

in Senior High Schools. A thorough understanding of factors and perception on ICT utilization, will inform educators in deciding how to address them, with the hope that they can be minimised if not eliminated entirely from the teaching and learning process.

Delimitation of the Study

This study focused on ICT facilities utilization (availability) by social studies teachers in Sekondi-Takoradi Metropolis. It specifically focused on whether ICT facilities are available and if teachers use them in their teaching and learning process. These ICT components include laptops/computers, internet systems, power point presentations, television, radio and among others. The scope of the study was limited to Sekondi-Takoradi Metropolis in the Western Region of Ghana.

Limitations of the Study

The possible bias that the respondents may give answers they consider to be acceptable (socially or academically) without necessarily being truthful about their perception and use of available ICT facilities. Again, there are conundrums in contending with the rate at which technology changes. As a result of blistering technological changes, the use of ICT facilities requires training to enable the use of the equipment. So by the time the study ended, it is possible that there already may have been the need for retraining. Thus, some of the findings may not hold as a result of the changing pace in the field of information and communication technology.

Organisation of the Rest of the Study

The second chapter deals with the review of the related literature. The third chapter dealt with the research methodology that was used in conducting

the study (research design, population, sample and sampling procedure, instrument used in the study, pre-test instrument, data collection procedure and data analysis). The fourth chapter dealt with results and discussion. The last, chapter 5, dealt with the summary of findings, the conclusions that were drawn, recommendations and suggestion for further research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Overview

In this chapter, the researcher reviewed literature related to the topic as documented by some writers, theorists, authorities and researchers. This chapter has been organised into two parts under theoretical and empirical review. The review of related literature on this study is organized under the following sub-headings: diffusion of innovation, historical development of social studies, concepts of social studies, concept and definition of Information and Communication Technology (ICT), benefits of ICT in education, policy framework for ICT in education in Ghana, availability of ICT facilities in social studies education, teachers' use of ICT facilities in teaching social studies, social studies teachers' perception on the use of ICT facilities in teaching social studies, teacher-factors that influence the use of ICT facilities in the teaching of social studies, challenges social studies teachers' face in the use of ICT facilities in teaching of social studies.

Theoretical Review

Diffusion of Innovation Theory

Historically, the concept of diffusion research dates back to the turn of the century with work by Tarde, and existed among various disciplines but was united with Rogers' seminal book Diffusion of Innovations

(Rogers, 1962). He reviewed 506 diffusion studies and found that there were related patterns of the adoption process in this body of research. Diffusion research now includes a large body of literature including: agriculture, health, anthropology, sociology, industry, medicine, and education. The most recent edition of diffusion of innovations (2003) indicated that there are now over 5,200 studies and growing. One of the reasons there was so much interest in diffusion of innovations research was because of the difficulty that people and organizations have had in getting a new idea adopted, even when it has obvious advantages.

The diffusion of innovations theory describes a process in which an innovation is communicated through certain channels over time among members of a social system (Rogers, 2003). Rogers stated that diffusion is a special type of communication about an idea that might work or not work. Rogers argued that adoption or rejection of new ideas lead to a social change thus a "process by which alteration and functioning occur in a social system" (p. 6). Most of the new ideas that have been investigated in diffusion studies are technological innovations and therefore Rogers (2003) used "innovation" and "technology" synonymously. According to Rogers, any diffusion process is influenced by four elements: innovation, communication channels, time, and a social system.

An innovation, according to Rogers, is an "idea, practice or object that is perceived to be new by an individual or other unit of adoption" (p. 12). An innovation may have been invented many years before, but if it is new to an individual then it is an innovation. The newness of an innovation is related in

terms of the knowledge, persuasion, and decision stages of an innovation-decision process.

The adoption rate of an innovation depends on how individuals communicate among themselves. Elaborating how the process of communication between individuals occurs, Rogers (2003) introduced the concepts of homophily and heterophily. Rogers observed that homophily is more effective when similar individuals live closely and share similar goals. On the other hand, Rogers described heterophily, the opposite of homophily, as the degree to which two or more individuals differ in certain attributes. Rogers argued that diffusion of innovation does not occur between individuals with similar skills levels because there is no information to exchange between them. However, diffusion of innovation occurs when there is some degree of heterophily between two individuals in a communication process.

Time is an important variable in the diffusion of innovations process (Rogers, 2003). Rogers elaborated that there are three ways in which time is involved in the diffusion of innovation process: firstly, the innovation-decision process thus the time an individual progress from the initial knowledge acquisition through the adoption or rejection of an innovation. Again, the innovativeness and adopter categories-how early or late an individual adopts an innovation compared to other individuals in a system. Finally, the rate of adoption; the speed an innovation is adopted by individuals in a social system.

Rogers (2003) defined a social system as a "set of interrelated units that are engaged in joint problem solving to accomplish a common goal" (p. 23). These units of a social system may be individuals, groups, or organizations. According to Rogers, all the members "cooperate at least to the

extent of seeking to solve a common problem in order to reach a mutual goal" (p. 24). The bond of working together is strengthened by the common problem. In organizations, for instance, individuals work together to achieve common goals through ranks and division of labour (Rogers, 2003).

New innovations adoption process usually begins with a tiny number of innovators according to Rogers' theory of diffusion of innovation (Robinson, 2009; Rogers, 2003). Thus, adopters of innovation can be categorized as shown in Figure 1.

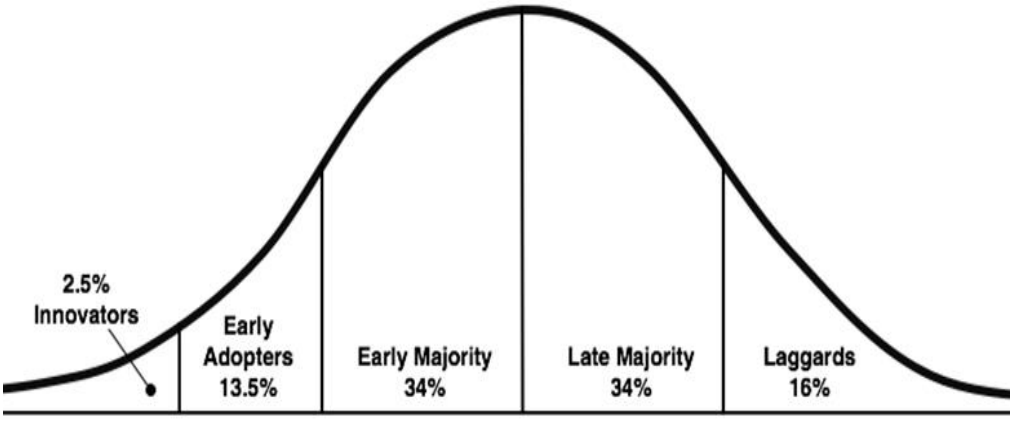

Figure 1: Diffusion of innovation model

Source: Rogers (1962)

A population can be broken down into five different segments, based on their propensity to adopt a specific innovation: Innovators, early adopters, early majorities, late majorities and laggards.

The adoption as decision process requires the potential adopter to collect information regarding the technology, examine the technology, and consider whether it provides sufficient improvement to deserve the investment of energy and time that is needed to add it to his/her range of skills (Rogers, 2003). Therefore, people tend to explore the new technology, and experience

how effectively it would work in their activities before accepting or rejecting those technologies (Rogers, 2003). This theory tries to explain how an innovation, which may be about an idea, behaviour, or object, is adopted among population. Diffusion of innovations theory offers valuable insights into the process of social change (Robinson, 2009) as the main qualities that provide a successful spread of an innovation. These include the significance of peer-to-peer conversations along with peer networks and the understanding the needs of different user segments.

Spreading of new innovation can be achieved through considering five qualities related to the innovation from the perspective of the innovators; based on Rogers, (2003), these five qualities are: firstly, relative advantage thus the greater the realized relative merit of an innovation, the quicker its rate of adoption is likely to be. Again, compatibility, it refers to the degree to which an innovation is perceived as being consistent with the values, past experiences, and the needs of possible adopters. Furthermore, simplicity and ease of use, new ideas that are simpler to understand for the potential adopter are adopted more rapidly than innovations that require the adopter to develop new skills and understandings. Also, trialibility, it refers to the degree to which an innovation can be experimented with on a limited basis. Finally, observable results, the easier it is for individuals to see the results of an innovation, the more likely they are to adopt it.

In sum, the diffusion of innovations theory might be particularly useful to study technological innovations in a developing country like Ghana. Therefore, Rogers' diffusion of innovations theory was particularly useful in understanding the technological innovations in ICT utilisation; the innovation-

decision processes for teachers and the stages involved, technological needs of different adopter categories (the early adopters and late adopters), communication channels used by teachers to share information related to technology adoption and organizational unit of the social system and how it influences technology adoption.

Conceptual Framework

From the framework below, it can be seen that the ICT incorporation into the SHS system has several components. Firstly, the availability of ICT facilities is very important and these facilities include computers, printers, internet system and overhead projectors. This will then result in utilization of the aforementioned relevant ICT facilities in teaching and learning process. Again, the perceptions teachers have and form about the use of ICT facilities play a role in the utilisation of these facilities. Some of these perceptions are; it makes lessons more interesting, saves time and makes lessons more diverse. Furthermore, ownership of personal computer, confidence, willingness and competence in the use of ICT facilities are all teacher-factors which affect the use of ICT facilities. Also, lack of confidence, insufficient ICT facilities, lack of training and lack of knowledge about ICT facilities are challenges teachers face on the utilisation of ICT facilities. The factors discussed above all contribute to the utilisation of ICT facilities.

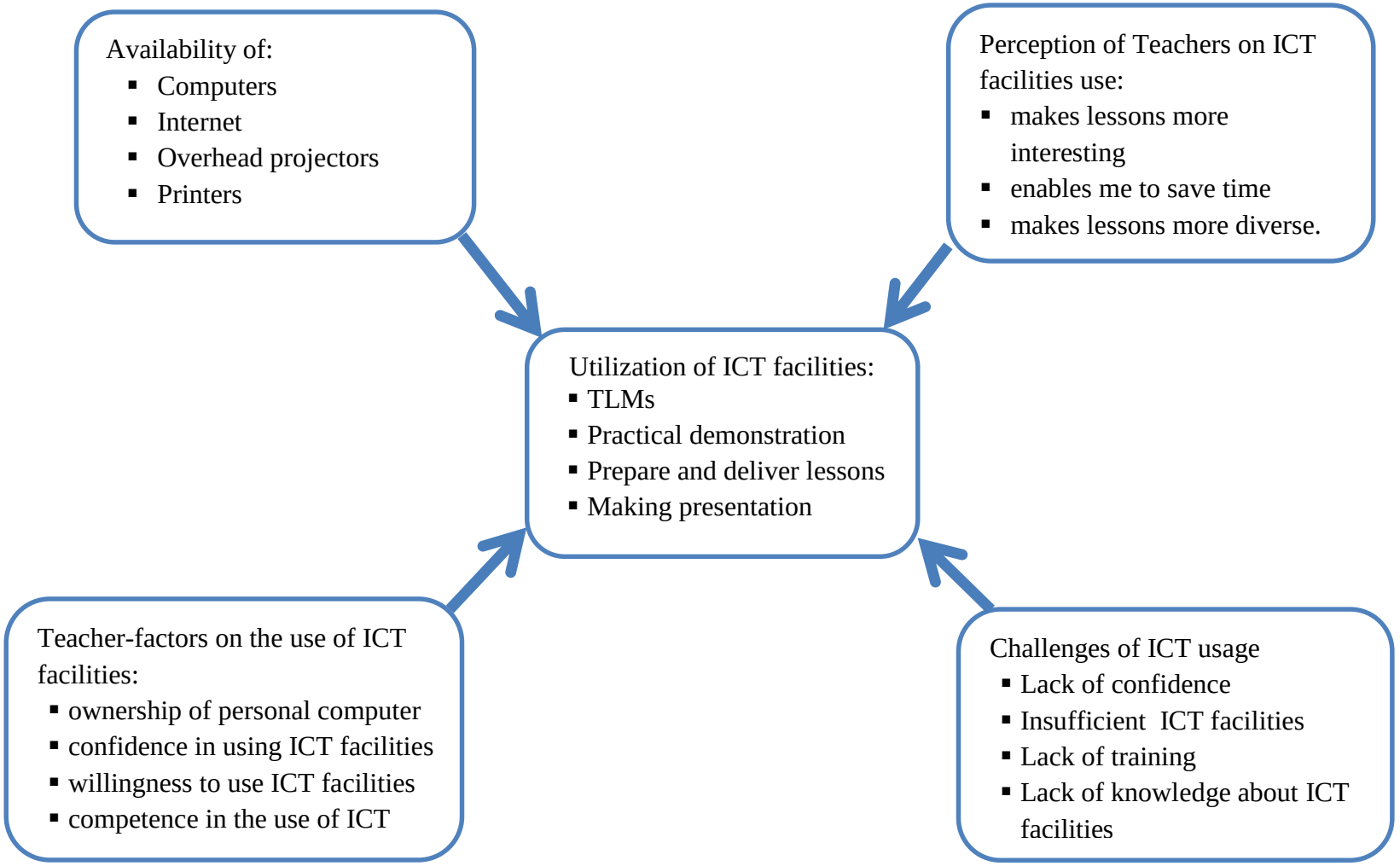

Figure 2: conceptual framework

Source: Researchers own construct (2015)

Historical Development of Social Studies

The field of social studies was developed in the early years of the 20th century in the United States of America. It was built on the foundations of history which was recognised as the central study of social studies. The change from the traditional subjects of history to social studies occurred in the Jones Report (Ravitch, 2003) on social studies; incorporated into the famous Cardinal Principle Report of the National Education Association in 1918 which suggested that the goal of social studies was good citizenship and that historical studies that did not contribute to social change had no value. This report gave a strong boost to social studies teaching. The study of history was considered too "academic" and far removed from students' immediate needs and that they made no contributions to social efficiency. It was in the field of social efficiency that social studies was born. The idea was to teach students facts and skills that were relevant to the institutions of their own society and also to prepare them for the real world that would confront them when they left school. By the 1930s, the social studies programme had displaced history with its expanding environment concepts that is, the home, neighbourhood and community (Ravitch, 2003). Social studies was therefore intended to provide an integrative education aimed at training students as decision makers.

In Africa, ideas on how to modernise the teaching of social studies in the school curriculum were expressed as early as 1961 at the Endicott Summer House Study in the Massachusetts Institute of Technology (MIT), U.S.A. where prominent African, British and American educationalists addressed themselves to the issues of educational problems facing post-war

Africa, especially the newly independent nations and how to find solutions to their educational problems in the humanities and social sciences, language, mathematics, science and teacher education. At the summit various sub-committees were set up, one of which was charged to prepare a syllabus for the social sciences. The subcommittee on social studies decided among other things that:

> The teaching of geography, history and civics as separate disciplines in the primary schools in Africa introduces an artificial division in the social sciences which should be discouraged in the early years of schooling. The child should be introduced to the social sciences as an integrated field of study and should be made to appreciate right from the beginning of his education the close relationship between the disciplines which later emerge as distinct fields of learning (ASSP Report, 1990, p. 57).

This, in the view of the group was to make the child aware that he and the community were geographically, historically, socially and economically one. For want of a suitable name, the subcommittee suggested that such an integrated area of study should be known as 'social studies'.

In 1967, a meeting was held at Queens College, Oxford where participants decided on the need to give attention to the development of social studies in primary schools. This meeting was sponsored by the Education Development Centre (EDC) and Centre for Research and

Educational Development Overseas (CREDO). In 1968 another conference was held in Mombasa, Kenya. According to Tamakloe (1976) the Mombasa Conference marked the turning point in the development of social studies in Africa. This conference gave birth to the African Social Studies Programme (ASSP) whose primary purpose was to assist African countries by:

(a) Collecting and disseminating information of social studies projects in Africa and elsewhere through reports, newsletters and original documents.

(b) Assisting member countries to organise workshops, courses, seminars, and conferences for the exchange of ideas and for in-service training of teachers to enable them adapt to the new approach to the teaching of social studies.

(c) Encouraging the initiation of research in social studies teaching in the development of materials for primary and secondary schools in Africa and involve professional and university people (Dondo, Krystall & Thomas, 1974, cited in Melinger, 1981, p. 314).

It is important to note that the major objective of the African Social Studies Programme now African Social and Environmental Studies Programme (ASESP) is that social studies should be taught as an integrated discipline.

On the Ghanaian scene Bruce (1988) reports, that there had been attempts at ‘integration of a sort’ in the social sciences. According to him,

between 1950 and 1954 some form of integration appeared in the syllabuses of teacher training colleges notably Wesley College, Government Training College (Winneba), and Presbyterian Training College-Akropong Akwapim. However, by 1955 the programme had collapsed due to lack of personnel to teach the integrated subject. Tamakloe (1976) also points out that before 1968, there existed an area of study termed 'centres of interest' in the primary school curriculum which appeared to be an integration of subjects like history, geography and civics which was only undertaken at the lower primary level (primary one to three). He further observed that this programme "consisted of just topics which had been jumbled up in the name of integration; the topics [however] lacked cohesion" (p 16).

The development of the social studies programme in Ghana began in 1967 with the setting up of the Curriculum Research and Development Division (CRDD). Between August and September 1968 a conference was held at the Advanced Teacher Training College, Winneba under the auspices of the British Council. From there a pilot programme on social studies teaching was started in four selected centres namely Saltpond and Assin Fosu in the Central Region, and Ho and Hohoe in the Volta Region. According to Tamakloe (1976) "there was a great controversy on the choice of name for the new programme being developed. While one group felt it should be called social studies one contended it should be called environmental studies" (p.16). The programme in its fourth year of pilot testing saw the inauguration of the National Association of Curriculum and Courses (NACC). All primary Syllabuses were reviewed and improved with the sub-committee on social

studies agreeing that the new programme should be officially called environmental studies.

With the advent of the Education Reforms in 1987 the term 'social studies' was once again officially used for the subject in all levels of the school system. In 1988, the CRDD published new textbooks 'Ghana Social Studies Series' to replace the environmental studies programme in all schools. In 1996, when the Free Compulsory and Universal Basic Education (FCUBE) was introduced, the term 'social studies' was still used for the subject at both the primary and the then junior secondary but in the syllabus that was introduced in the primary schools in 1988, the term 'environmental studies' was once again used at the primary school level. Presently, the subject is referred to as 'environmental studies' at the primary school while at the junior and senior secondary schools the term social studies is used. At the Teacher Training Colleges and the University of Cape Coast the term 'environmental and social studies' is used for the programme.

Concepts of Social Studies

The term social studies is used to designate that school subject which deals with human relationship. Tamakloe (1994) looks at social studies as a subject that deals with man and his relationship to his environment. This goes to explain the fact that teaching of social studies should aim at exposing learners to the way of life of the society and the realization that humans, plants and all the other animals are dependent upon each other.

Linguist (1995) defines social studies as "an integration of knowledge, skill and processes and goes on to say that "the subject provides powerful learning in the humanities and social science for the purposes of helping

children learn to be good problem solvers and wise decision makers" (p. 1). To Martorella (1994) "the social studies are selected information and modes of investigation from the social sciences, selected information from any area that relates directly to an understanding of individuals, groups and societies, and application of the selected information to citizenship education" (p. 7). To these writers, social studies is taught to promote citizenship by using social science concepts.

Barr, Barth and Shermis (1977) state that, "the social studies is an integration of experience concerning human relations for the purpose of citizenship education" (p. 69). Similarly, the African Social and Environmental Studies Programme (ASESP,1994) sees social studies as "the integration of purpose of promoting and practising effective problem solving, promoting citizenship skills in social, political and economic issues and problems" (p.5).

On its part, the Ghana Education Service (GES, 2001) defines social studies as "an integrated body of knowledge, skills, and attitudes that will help the pupils develop a broader perspective of Ghana and the world" (p. iii). The official definition of the National Council for the Social Studies (NCSS) contains a strong inter-disciplinary focus with the aim of solving social problems. It states that social studies is the integrated study of the social sciences and humanities to promote civic competence within the school programme. To the NCSS, because civic issues such as health care and crime are multi-disciplinary in nature, understanding these issues require multi-disciplinary education.

It is evident from these definitions that one main characteristic that makes social studies more distinct is that it incorporates many fields of endeavour. The integrative nature of social studies therefore calls for critical thinking about social issues leading to the development of thoughtfulness in students. Through integration, pupils acquire a variety of skills including those of inquiry, investigation and discovery as they are actively involved in the teaching and learning process.

Definition of Information and Communication Technology (ICT)

According to Daniels (2002) ICTs have become within a very short time, one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy. However, there appears to be a misconception that ICTs generally refer to 'computers and computing related activities'. This is fortunately not the case, although computers and their application play a significant role in modern information management, other technologies and/or systems also comprise of the phenomenon that is commonly regarded as ICTs.

ICT is an acronym that stands for Information and Communications Technology. There is no universally accepted definition of ICT because the concepts, methods and applications involved in ICT are constantly evolving on an almost daily basis. ICT covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form. For example, personal computers, digital television, email, internet etc. The field of education has been affected by ICTs, which have undoubtedly affected teaching and research.

Pelgrum and Law (2003) state that near the end of the 1980s, the term 'computers' was replaced by 'IT' (information technology) signifying a shift of focus from computing technology to the capacity to store and retrieve information. This was followed by the introduction of the term 'ICT' (information and communication technology) around 1992, when e-mail started to become available to the general public (Pelgrum & Law, 2003).

According to a United Nations Economic Commission for Africa [UNECA] (1999) ICTs cover Internet service provision, telecommunications equipment and services, information technology equipment and services, media and broadcasting, libraries and documentation centres, commercial information providers, network-based information services, and other related information and communication activities.

UNESCO (2002) information and communication technology (ICT) may be regarded as the combination of 'Informatics technology' with other related technology, specifically communication technology. The various kinds of ICT products available and having relevance to education, such as teleconferencing, email, audio conferencing, television lessons, radio broadcasts, interactive radio counselling, interactive voice response system, audiocassettes and CD ROMs and many others have been used in education for different purposes (Sharma, 2003; Sanyal, 2001; Bhattacharya and Sharma, 2007).

It could be viewed as a set of activities which is facilitated by electronic means. It could also mean the processing, transmission and display of information via electronic means. British Educational Communications and Technology Agency (BECTA, 2000) in its own definition defined ICT as

techniques people use to share, distribute, and gather information and to communicate through computers and computer networks. Yunus (2007) described ICT as a complex varied set of goods, applications and services used for producing, distributing, processing, transforming information (including) telecoms, TV and radio broadcasting, hardware and software, computer services and electronic media. Adeleke (2005) and Agba, Kigongo-Bukenya, and Nyemba (2004) and Stevenson (1997) viewed ICT as a cluster of associated technologies defined by their functional usage in information access and communication.

Information and Communication Technology are computer based tools used by people to work with information and communication processing for the needs of an organisation. It covers computer hardware, software, the network and other digital devices like video, audio, camera and so on which convert information (text, sound, motion etc.) into digital form (Muehleisen, 1997).

According to Nwagwu (2006), Information and Communication Technologies (ICTs) are electronic technologies used for information storage and retrieval. Ayodeji (2004) defined ICT as electronic-based technology that is generally used to retrieve store, process, and package information as well as provide access to knowledge. The development of microcomputers, optical disc, the establishment of telecommunication network, television, internet, etc. have assisted in broadening people's knowledge and facilitating effective communication. Ugwu and Oboegbulem (2011) stated that ICTs in education encompasses a great range of rapidly evolving technologies such as desktops, notebooks, digital camera, local area network (LAN), the internet and the

World Wide Web (WWW), CD-ROM (Compact Disc Read-Only Memory) and DVDs and applications spread sheets, tutorials, simulations, electronic mails, digital libraries, computer-mediated conferencing, video conferencing and virtual reality. In effect, ICT has reduced the barriers that characterised interrelationship in terms of space, time, and learning activities. ICT tools for teaching and learning include computer, internet, PowerPoint, television, overhead projectors, camera, radio cassette, video tape, audio cassette, audio cd, www, telephone, etc. (Gannon, 2004).

Information and Communication Technology as tools within the school environment include use for school administration and management, teaching and learning of ICT related skills for enhancing the presentation of classroom work, teaching/learning tasks, teaching/learning intellectual, thinking and problem solving skills, stimulating creativity and imagination, for speech by teachers and students and as communication tool by teachers and students (Pennington, 1996 and Moore 1996).

According to Lever-Duffy, McDonald and Mizell (2003), ICT comprises the use of at least a computer and the internet as well as computer hardware and software, networks, and a host of devices that convert information (text, images, sounds, and motion) into general digital formats. Information and communication technology (ICT), in this context, represent a new approach for enhancing the dissemination of information and will be used, applied, and integrated into learning on the basis of conceptual understanding and methods of informatics.

From the earliest times when computers were commercially available, they could be found in use in educational institutions, and educators (Bork,

1980) argued that computers should be used to support learning. Initially, computers were used to teach computer programming but the development of the microprocessor in the early 1970s saw the introduction of affordable microcomputers into schools at a rapid rate. Computers and applications of technology became more pervasive in society which led to a concern about the need for computing skills in everyday life.

As public awareness grew, this need for computer literacy became extremely influential and many schools in the developed world purchased computers based on this rationale. The 1990s was the decade of computer communications and information access, particularly with the popularity and accessibility of internet-based services such as electronic mail and the WWW. At the same time, the CD-ROM became the standard for distributing packaged software replacing the floppy disk. This allowed large information-based software packages such as encyclopedia to be cheaply and easily distributed. As a result, educators became more focused on the use of the technology to improve student learning.

Benefits of ICT in Education

ICTs are rapidly transforming the world into an information society. This transformation requires that the education sector be able to harness the full potential of ICTs to improve the quality of teaching and learning. It is, therefore, not surprising that the use of ICTs is on the rise in many educational institutions because they serve numerous purposes in teaching and learning.

Fan and Ho (2012) identify three main uses of ICT in education. The primary role of ICT is to improve teaching and learning using application

software. The second purpose is to facilitate administrative roles such as grading and keeping records in schools for tracking students' learning history and performance. The third role of ICT in education is to build information literacy of students.

The rationale for ICT investments in education is based on the assertion that traditional teaching and learning methods in which knowledge is imposed on learners have not provided enough opportunities for learners to create their own knowledge and develop critical minds. Osin (1998) thus argues that the use of computers in classrooms provide key ingredients in teaching and learning that were lacking in all previous tools that raised high expectations when introduced in the educational system. Previous tools such as the blackboard only presented information to students. Computers have resulted in what he calls ''individualized interactivity'', providing the opportunity for information to be given to students as well as adopting presentations to students' needs and preferences.

The integration of information and communication technologies can help revitalize teachers and students. This can help to improve and develop the quality of education by providing curricular support in difficult subject areas. To achieve these objectives, teachers need to be involved in collaborative projects and development of intervention change strategies, which would include teaching partnerships with ICT as a tool. According to Zhao and Cziko (2001) three conditions are necessary for teachers to introduce ICT into their classrooms: teachers should believe in the effectiveness of technology, teachers should believe that the use of technology will not cause any disturbances, and finally teachers should believe that they have control over

technology. However, research studies show that most teachers do not make use of the potential of ICT to contribute to the quality of learning environments, although they value this potential quite significantly (Smeets, 2005).

Harris (2002) conducted case studies in three primary and three secondary schools, which focused on innovative pedagogical practices involving ICT. Harris (2002) concludes that the benefits of ICT will be gained "…when confident teachers are willing to explore new opportunities for changing their classroom practices by using ICT. As a consequence, the use of ICT will not only enhance learning environments but also prepare next generation for future lives and careers (Wheeler, 2001). Changed pool of teachers will lead to changed responsibilities and skill sets for future teaching involving high levels of ICT and the need for more facilitative than didactic teaching roles (Littlejohn, Suckling, Campbell & McNicol, 2002).

ICT impacts on a large section of education, from record keeping and school websites to the creation of online learning communities (Bishop, 2007). Educational institutions can use specialized websites to make learning resources available online at any time. Some educational institutions do not even require students to be physically present. Virtual classrooms have flourished in tandem with improved internet accessibility. The significant barriers of time and distance are rendered almost obsolete in such virtual classrooms (Stennes, 2008).

Another advantage for using ICT in education is that using ICT tools correctly, in and out of the classroom, can increase communication and collaboration between teachers in and out of school, between teachers and

students and between students and students moving away from the old "banking" way of teaching where information is only moved from teacher to students without any freedom for critical analysis on the part of the learner (Hawkins, 2002). In their research report Digital Horizons: Laptops for Teachers' Evaluations, Cowie, Jones, Harlow, McGee, Millar, Cooper and Gardiner (2008) found that ICT tools such as the laptop were supporting communication and the sharing of work between teachers and students in and out of class time. Students were said to be seeking to engage with teachers' lesson materials in different ways and teachers were more easily able to share teaching notes and exemplary work with students via CD and email. Furthermore, teacher and student experiences have been improved when working around a computer or using ICT tools.

Jacobson and Levin (1993) noted that teachers have a firm conviction that the use of the technology will help students in their education, and they concluded that the use of electronic mail, for example, in research and communication will help teachers and students to save time. Balanskat, Blamire, and Kefalla (2007) support Jacobson and Levin's position by emphasizing that most progress has been made in recent years in raising teachers' positive attitudes towards ICT by realizing its value for learning through more experience and embedded use. Teachers increasingly use ICT to prepare their work more efficiently and achieve time gains. In the latest Euro barometer benchmarking survey (September, 2006), 90% of teachers in Europe already use ICT to prepare their lessons.

However, the benefits of ICT use in the classroom depend on the success with which it has been integrated (Condie & Munro 2007). Dawes

(2001) asserts that new technologies could support education across the entire curriculum, providing innovative opportunities for effective communication. ICT in education has undoubted potential, to be influential in changing teaching methodologies.

UNESCO (2007) is of the view that adopting ICT into the educational systems has the potential of increasing the quality of education delivery as well as facilitating greater access to information and services by marginalized groups and communities. Therefore, when used effectively, ICTs could:

1. Make education easier, cheaper to access and free of the limitation of distance.
2. Result in better academic performance due to changes in teaching and learning.

Studies have also demonstrated that computer use can result in effective literacy gains. There is empirical evidence that students, who are having difficulties with reading, can be motivated and engaged through the use of ICT (Lynch, Fawcett & Nicolson 2000; O Murchú 2000; Segers & Verhoeven, 2002).

Policy Framework for ICT in Education in Ghana

Ghana has not failed in her efforts to equip her citizens with ICT skills to be able to function efficiently in a world that is progressively being transformed into a knowledge-based one. ICT inception in all sectors of the economy, including education, has therefore become a public policy priority. Efforts to introduce ICT in schools derive from the national ICT for

Accelerated Development policy of 2003 and the ICT in Education policy of 2008.

The Government of Ghana has placed a strong emphasis on the role of ICT in contributing to the country's economy. The country's medium-term development plan captured in the Ghana Poverty Reduction Strategy Paper (GPRS I&II) and the Education Strategic Plan 2003-2015 all suggest the use of ICT as a means of reaching out to the poor in Ghana (Government of Ghana, 2004). In 2004 the Ghanaian Parliament passed into law Ghana's ICT for Accelerated Development (ICT4AD) policy, which is currently at various stages of implementation. This policy represents the vision of Ghana in the information age and addresses 14 priority focus areas including accelerating human resource development and promoting ICT in education.

In 2008, the Ministry of Education came up with the ICT in Education policy which outlines the plans and strategies for integrating ICT in education at all levels. The overall vision of the ICT in Education policy is the use of appropriate ICTs to support and align the sector Ministry's policies, objectives and strategies, particularly as it relates to equitable access to education, quality of education, educational management, science and technology and labour market needs. The mission is to articulate the relevance, responsibility and effectiveness of utilizing Information and Communication Technologies (ICTs) in the education sector, with a view to addressing current sector challenges and equipping Ghanaian learners, students, teachers and communities in meeting the national and global demands of the 21st Century. The specific objectives of the policy are to:

1. Facilitate the deployment, utilization and development of ICT within the educational system to improve educational access and delivery to support teaching and learning from the primary level upwards.
2. Transform the education system in order to improve the quality of teaching and training at all levels of the educational system and expanding access to education, training and research resources.
3. Orient all levels of the country's educational system to the teaching and learning of science and technology in order to accelerate the assimilation of science and technology in society.
4. Achieve universal basic education and improve the quality of basic education and computer literacy in the nation.
5. Ensure that all citizens are at least functionally literate and productive.
6. Expand and increase access to secondary and tertiary education.
7. Strengthen science education at all levels of the educational system, especially at the basic and secondary levels.

Four key factors underlie the strategies for achieving the specific objectives outlined in the policy. They are equity in the allocation of resources, affordable and continuous access to ICT infrastructure, capacity building of users and the development of norms and standards with regard to ICT use.

Additionally, the policy has seven thematic areas. These areas outline the guiding principles and strategies to be put in place to accomplish the goal of integrating ICT in education. The first thematic area seeks to enhance education management by building the capacity of the Ministry of Education and all its agencies. By doing so, ICT can be effectively used to generate

data for informed decision making. The second thematic area concerns building the ICT capacity of all persons involved in education delivery, especially teachers, to facilitate the incorporation of ICT into teaching and learning at all the levels of education in Ghana. The third thematic area is concerned with infrastructure provision, e-readiness and equitable access to ICT in all schools. Other areas of concern are content development, ICT integration into the curriculum, technical support, maintenance and sustainability of ICT infrastructure.

Implementation of the policy consists of three phases. The initial phase is to enhance the preparation of educational institutions to use ICT for teaching, learning and administrative roles. The second phase is to encourage community support for ICT infrastructure in educational institutions as well as introducing curriculum guidelines for ICT integration. The final stage entails the integration of ICT into teaching, learning, education management and governance.

Translating the objectives and strategies of the policy into action requires government support and institutional collaboration. Overall, the Ministry of Education is responsible for the implementation of the ICT in Education Policy. However, the ministry's ability to shoulder this responsibility is constrained by inadequate funds. Therefore, partnering with other agencies and development partners, both local and international, is essential in the successful implementation of the policy.

Indicators and targets are to be developed at the national and regional levels to effectively measure the successes or otherwise of the policy

implementation. Annual reviews as well as three years evaluations are to be conducted to help in the implementation process.

Availability of ICT Facilities in Teaching of Social Studies

Tezci (2011) as well as Szeto and Cheng (2013) underscore the fact that the availability of ICT resources is important to generate situations in which teachers can make use of ICT in their classrooms with certainty and correctly (Tezci, 2011; Szeto & Cheng, 2013). The availability of ICT resources in schools depends on whether the school has procured the resources or the Department of Education has provided the resources.

An important variable of ICTs integration in schools is availability of ICT facilities. In his doctoral dissertation, Ottesen (2006) reveals that one fundamental problem facing ICT integration in schools is the lack of computer facilities. In a related study Norris, Sullivan, Poirot and Soloway (2003) reveal that appropriate access to ICT facilities is another key factor in the effective technology integration process. The study reveals substantive correlation between technology access and use. In another study, Yildrim (2007) reveals that teachers agreed that access to ICT facilities is one of the effective means to integrate ICT in classrooms. Together, education and employment are key building blocks of strategies to eradicate poverty. ICT is increasingly being used to improve access to education and employment.

The efficacy of ICT in higher education has been proved beyond reasonable doubt. It has been known to enhance educational opportunities of individuals and groups constrained from attending traditional universities as well as the use of computers as tutors for drills and practice as well as instructional delivery (Potashnik & Capper, 1998; Umoren, 2006). The

unfortunate thing is that, ICT resources are beyond the reach of teacher educators and as such, they cannot access them for the purpose instructional development.

In an attempt to investigate availability and access to the internet, Kenya School Net (2003) found that email was yet to be recognised as a tool for collaboration among students and teachers. It went on to affirm that in the schools surveyed, access to the internet was severely limited and when available was only for administrative use. The study found that almost 40% of these schools had less than 10 computers, and were therefore inadequate for teaching and learning. More than 20 per cent had less than 5 computers, indicating that the computers were mostly for administrative use. Only a third of schools studied had dedicated computer laboratories.

Idoko and Ademu (2010) in an investigation of the challenges of ICT for teaching/learning as perceived by agricultural science teachers in 210 secondary schools from the three educational zones in Kogi State in Nigeria also found that ICT facilities were not available in secondary schools. Similarly, Fakeye (2010) also investigated English Language teachers' knowledge and use of ICT in Ibadan Southwest LGA of Oyo State and found that availability of computers and their connectivity to the internet was non-existent in virtually all the school studied and utilisation, which is dependent on availability, and because availability is poor, thus, usability was also found to be poor.

Teachers' use of ICT Facilities in Teaching Social Studies

Information, Communication and Technology has made tremendous advances which could effectively be put to advantage to enhance educational

delivery. Many Ministries of Education have recognised this potential and have reformed their educational system take advantage. In a case study of some pioneer schools in ICT integration (Boakyi & Banini, 2006) discovered that some schools in both the public and private sector in the education industry had taken advantage of the ICT innovation and were making good progress. Their study identified ICT integration approaches being applied to include the use of pre-identified websites for teaching and learning right off the internet, the use of interactive CD ROMs, as well as, teaching children to do presentations or research with the help of the computer. It also involved the use of the PowerPoint software to teach as well as referring pupils and students to some radio programmes which were considered educative.

The study identified some positive effects of ICT use to include "increased teacher student interaction, pupil/student-centred learning, increased level of capability on the part of students to do independent learning and the practicalisation of hitherto theoretical and abstract concepts on the part of both students and teachers". Shutte (1999), Haughey and Anderson (1999) and Jonassen (1996), have all demonstrated that the new technology represents a unique and fascinating option in the teaching and learning process. The advantages are many in terms of flexibility, accessibility, increasing communication and interactions, as well as, a variety in the modes of teaching and learning. ICT integration results in more effective learning, improved teaching more suited to the daily realities for the pupils, better leadership of administrators and members of the community in the school life.

According to Haddad and Drexler (2002), an effective teaching/learning process must stimulate intellectual curiosity and offer a

sense of enjoyment that will move the students from the passive role of recipients of information to the active role of builders of knowledge. Yet, engaging the learner in this process can be the most challenging task for teachers. ICTs are effective instructional aids to engage students in the learning process. The Internet allows cost-effective information delivery services, collaborative and distance education, more than has ever been imagined (Clyde, 1995; Todd, 1997). The Internet has myriad websites to help teachers develop or improve lesson plans, exchange ideas, obtain information, and find free animations and simulations to enliven their lessons.

Elsewhere the computer technology has made it possible for teachers and students to interact through the Internet. ICT are resources that can be deployed to augment existing teaching and learning materials. Haddad and Drexler (2002) identify at least five levels of ICT use in education: Presentation, demonstration, drill and practice, interaction, and collaboration. Websites today abound where instructors and students can visit in order to obtain needed information and interact. This is used in most distance education programs. United Nations Institutions for Training and Research (UNITAR), for instance, uses the Internet as a medium to offer training programmes to thousands of public sector workers around the world. The computers have become motivating tools for teaching and learning in schools.

Teachers use computers to write lesson plans, prepare materials for teaching, record and calculate student grades, and communicate with other teachers. As such, “computers have become a routine tool for helping teachers accomplish their professional work” (Becker, Ravitz, & Wong, 1999).

However, many teachers do not facilitate substantial student use of computers for learning activities (Becker, Ravitz, & Wong, 1999).

Computer-based tests are easier to administer and are quicker to mark. Research shows that the use of computers for drill and practice, and for instructional delivery, combined with traditional instruction, results in increases in learning in the traditional curriculum and basic skills areas, as well as higher test scores in some subjects compared to traditional instruction alone (Fouts, 2000). ICT-enhanced learning mobilizes tools for examination, conclusion, and analysis of information, providing a platform for student inquiry, analysis, and construction of new information. Learners therefore learn as they do and whenever appropriate, work on real life problems in-depth, making learning less abstract and more relevant to the learner's life situation. In this way, and in contrast to memorization-based or rote learning, ICT-enhanced learning promotes increased learner engagement (Wastson, 2002).

Waite (2004) indicated that even though teachers showed great interest and motivation to learn about the potential of ICT, in practice, the use was relatively low and it was focused on a narrow range of applications, with word processing being the predominant use. Harris (2000) revealed that the highest percentage of use of computers and the internet was for preparing instructional materials. Lowest percentage of use of computers and the internet was for instructional use for students. The teachers used word processing primarily for preparing instructional materials, instructing students in the classroom and interactive lab. The second highest use was for web searching.

Many writers with an interest in the use of ICT in Social Studies argue that the word processor can be a powerful tool in developing pupils' history skills (Haydn, 2001). Word processing was found by Ofsted to be the most common form of ICT use in history in schools, and its potential to develop historical thinking was also identified (Ofsted, 2002). The word processor can help pupils to organise their historical thinking, analyse and interrogate sources and structure their writing. Prior and John as cited in Ofsted (2002), describe the benefits of using a word processor to facilitate 'revelatory writing'. Here, pupils participate in historical writing and interact with its content, enabling them to take control of their own historical writing, and providing opportunities for developing different writing styles.

Social Studies Teachers' Perception on the use of ICT Facilities in Teaching Social Studies

Several researchers have argued that teacher beliefs about teaching and how students acquire knowledge play a critical role in determining not only the degree to which technology is used in the classroom but how technology is used to support teaching and learning. Teachers often view the technology integration as an additional imposition on their already demanding time schedule when they simply want to get on with the business of teaching. In addition to the fact they do not believe that they have the technical competence to effectively use technology in the classroom, they fail to see its utility or relevance for their subject. Research has shown that teachers" perceived usefulness of an innovation play a pivotal role in determining the extent to which that innovation will be adopted for use in the classroom (Hall & Hord, 2001).

In a survey of 170 secondary school teachers in New Zealand, Lai and Pratt (2004) found that 82% of the teachers considered ICT to be beneficial to their teaching but not in the area of methods of delivery and classroom practice. Significantly, the most obvious effect identified by the teachers was not a change of philosophy or pedagogy but improved efficiency in the administration and management of teaching, including lesson preparation and presentation. Similar findings were reported by Balanskat, Blamire, and Kefalla (2006) in their review of the ICT impact studies conducted in Europe. They found that ICT use enabled teachers to save time and to increase productivity in such activities as preparing and updating daily lessons and maintaining records. In addition, ICT use has fostered greater collaboration between teachers with increased sharing of resources and ideas. However, with respect to pedagogical practice teachers continued to use a more traditional approach to teaching simply viewing ICT as a tool to support their didactic approach. As such, they concluded that "teachers do not yet exploit the creative potential of ICT and engage students more actively in the production of knowledge" (p. 41).

A substantial body of research shows that teachers' perceptions of instructional benefits are an influential factor that affects technology integration in classrooms (Inan & Lowther, 2010; Knezek, Christensen & Fluke, 2003; Van Braak, Tondeur & Valcke, 2004). Current evidence shows that instructional benefits are defined as the perceived effectiveness of digital technology, which Petko (2012) describes as "the belief that student learning is improved with the help of digital media" (p. 1355). According to Petko, the element of effectiveness should include items related to "whether the use of

digital media could improve the quality of teaching, learning outcomes, interest, and creativity, collaborative work and learning strategies for the students" (p. 1355).

Van Braak, Tondeur and Valcke (2004) measured teachers' attitudes toward the effects of computer adoption in the classroom. Some items that these authors included in their measures were: "increases the level of creativity of pupils", "helps pupils to achieve better text writing", or "used as a learning tool, increases student motivation". The findings of the study showed that general computer attitudes -which included items such as computer liking, computer anxiety, and computer confidence- have a direct effect in the attitudes toward the use of computers in education. The study concluded that the attitudes toward computers in education have a considerable influence in teachers' technological innovativeness and teachers' classroom use of computers.

Perrotta (2013) has explored the influence of individual, classroom, school and system-level issues on how teachers experience the educational benefits of digital technology. In this study, perceived benefits of using technology included aspects such as the access that it gives to wider learning content and resources, and the fact that it allows students to become more motivated, more active and independent, and more attentive in their learning process. The study concluded that broader contextual and cultural conditions might influence teachers' perceptions of the benefits of digital technology.

Plomp, Brummelhuis and Rapmund (1996) identify three objectives which distinguished for the use of ICT in education such as, the use of ICT as object of study, the use of ICT as aspect of a discipline or profession; and the

use of ICT as medium for teaching and learning. Peck and Domcott (1994) outlined ten reasons that technologies should be used in schools: technology enables teachers to individualize instruction, which allows students to learn and develop at their own pace in a non-threatening environment; Students need to be proficient at accessing, evaluating and communicating, and information; technology can increase the quantity and quality of students' thinking and writing through the use of word processors; technology can develop students' critical thinking and allowing them to organize, analyse, interpret, develop, and evaluate their own work; technology can encourage students' artistic expression; technology enables students to access resources outside the school; technology can bring new and exciting learning experiences to students; students need to feel comfortable using computer, since they will become an increasingly important part of students' world; technology creates opportunities for students to do meaningful work, and; schools need to increase their productivity and efficiency. Thus, teachers are expected to make good use of modern teaching technology and develop effective teaching resources.

Becta (2004) reported that negative attitude was a barrier towards integration of ICT in teaching and learning while Rhoda and Gerald (2000) found that positive attitudes towards ICT use are widely recognized as a necessary condition for effective computer use in teaching and learning. Similarly, study findings by Kubiatko and Halakova (2009) pinpointed that attitude towards use of ICT in teaching and learning in learners was as a result of its impact. According to Selwyn (1999), integration of ICT in education environment depends, to a great extent, on teachers and student attitude

towards their use. This view is supported by Slouti and Barton (2007) findings which indicated that ICT can motivate students in their learning by bringing variety into the lessons and at the same time sustaining teachers own interest in teaching.

Teachers-Factors that Influence the use of ICT Facilities in the Teaching of Social Studies

The importance of information and communication technologies in the teaching and learning process has been proven by many research studies to be an effective way of supporting teaching and learning. Although many teachers do not use new technologies as instructional tools, some are integrating information and communication technologies innovatively into their teaching. There are a number of factors which encourage these teachers to use information and communication technologies in the teaching and learning environment (Cubukcuoglu, 2013).

With the help of ICT, teachers may continue to pursue the aim of education beyond the classroom walls. Students and teachers can interact outside the classroom and outside specific classroom hours (Loveless and Ellis, 2001). The use of ICT could be helpful for teachers in reaching many goals of education and support teaching and learning in and outside the classroom. However, many teachers who are used to traditional teaching methods and do not want to change their teaching strategies may not believe in the benefits of ICT in education.

Moreover, as a result of many other factors, new technologies may not be integrated into the teaching environment by specific subject teachers. On the other hand, teachers in many countries attempt to make innovative use of

these technologies since they believe in their benefits and positive effect on student learning or for other reasons. There appears to be numerous factors that influence teachers' use of ICT tools. The encouraging factors that influence teachers' innovative use of technology in the teaching of their subject can be divided into two sub-categories, namely, school factors and teacher factors.

School Factors

These factors are related to the conditions and facilities supplied for teachers and which facilitate their use of ICT in teaching (Veen, 1993). There are many such factors (Scrimshaw, 2004). For example, teachers believe that if they have their own laptop and easy access to computers, this would encourage them to integrate ICT into their teaching (Scrimshaw, 2004). Cox, Preston and Cox (1999) also discovered that teachers are of the opinion that having their own computer is one of the positive factors that influence the perceived ease of ICT use. Abdullah, Abidin, Luan, Majid and Atan (2006) argued that providing teachers with a laptop, projector, and computer software would motivate not only students but also teachers in the teaching and learning process. When teachers have easy access to computers, this might give them sufficient time to prepare materials, search the Internet, and/or review the necessary software. Furthermore, teachers may make better use of ICT when they have the opportunity to use high quality resources and have full access to hardware and software (Forgasz, 2006; Scrimshaw, 2004).

One of the factors that prevent teachers' use of ICT, namely, technical problems and inadequate technical support, demonstrates that providing high level technical support whenever needed would enable teachers to use ICT

(Forgasz, 2006; Lim and Khine, 2006; Scrimshaw, 2004; Yilmaz, 2011; Assan & Thomas, 2012). Moreover, it is important to be able to easily access the technology rooms and equipment available (Forgasz, 2006; Scrimshaw, 2004). Since, if teachers have the opportunity to access these tools and rooms at any time, they would be more eager to integrate them into their teaching (Scrimshaw, 2004).

The other most important factor that encourages teachers' technology use is adequate training on the use of ICT tools in teaching (Scrimshaw, 2004). The training should not only include basic technology skills but also provide training on improving pedagogical use of technology. This kind of training will help teachers feel confident and competent while using ICT at the right time and at the right opportunity. Moreover, when training offers real-life examples, it will help trainees to understand the best way and time to use ICT in teaching and learning. It is also discovered that commerce educators believe that professional support in teaching with ICT is also an important issue (Assan & Thomas, 2012).

Teachers also believed that having "whole school policies on using ICT across curriculum" is one of the school enablers for making effective use of ICT in the classroom (Scrimshaw 2004, p.9). The principal's positive attitude towards the use of ICT in teaching and learning and the school policy in this issue will be enablers for teachers (Forgasz, 2006; Veen, 1993). In Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur and Sendurur (2012) research teachers mentioned that the support from the administrators is one of the most influential enablers in integrating technology. It could be argued that the enablers mentioned above are all interrelated with this one. This is because

without a school-wide ICT policy, there would not be quality technical support, effective timetabling of ICT rooms and/or equipment, access to ICT resources, or training on the use of ICT in subject teaching.

Teacher Factors

The factors that enable teachers to use ICT are related to their own beliefs and skills (Veen, 1993), which is why they are identified as personal factors. Since they are intrinsic to teachers, these could be more effective in enabling the use of ICT in teaching and learning than school factors. Some of the factors that influence the use of technology in teaching and learning are "teachers' attitude, teaching priority, computer skills and teaching preferences" (Bakar, 2007, p. 29). Teachers' confidence in using ICT, experience, willingness, motivation, and the perceived usefulness of ICT in teaching and learning are some other important facilitators for the use of technology in education (Cox et al., 1999; ChanLin, Hong, Chang & Chu, 2006; Mumtaz, 2000). Drent and Meelissen (2008) discovered that having strong ICT competence is an important factor in innovatively using ICT in teaching, although not more important than other factors.

The level of teachers' pedagogical skills, that is to say, whether teachers are able to integrate ICT appropriately and know exactly how they will teach with ICT, is another major enabling factor (Veen, 1993). Of course, knowing how and when to use technology in teaching is related to having adequate training in the matter. Ertmer et al. (2012) also discovered that teachers' own attitudes, beliefs and knowledge and skills were mentioned as the biggest enablers in integrating technology.

The final but no less important personal enabling factor is teachers' awareness of the educational benefits of using ICT in their teaching. When a teacher is aware of the positive effects and benefits of a new method or tool for the students, s/he may become more eager to use it in teaching. It has been demonstrated that technology use in the teaching and learning environment motivates students (Abdullah et al., 2006). In addition, some teachers are of the opinion that technology use is useful for lesson preparation as well as for actual teaching (Cox et al., 1999). Being aware of all these benefits may thus promote the use of ICT in teaching.

Various factors encourage teachers' use of technology in their teaching as mentioned in many research studies. However, personal factors should be considered to matter more than the other factors since applying new technology is dependent on the teachers' positive attitudes and beliefs about its usefulness. Some of the enablers that promote the effective use of ICT in education as mentioned by teachers from a variety of countries were described here.

Several studies (Hadley and Sheingold, 1992; Sheingold and Hadley, 1993) used survey data to identify factors likely to be in evidence in teachers who to some extent have integrated ICT into their teaching practices. Sheingold and Hadley (1993) conducted a nationwide survey of fourth to twelfth grade teachers in the USA. The three major factors involved in these 'accomplished' teachers' success were: teacher motivation and commitment to their students' learning and to their own development as teachers, the support they experienced in their schools and access to sufficient quantities of technology (Mumtaz, 2000).

A study by Goyal, Purohit and Bhagat (2010) also revealed that, ease of availability of ICT, upgrading teacher's ICT skills, convenience (time and place), time to upload and download (speed), improving communication between students and teachers, reliability of ICT, data security, availability of specialised IT teachers, availability of educational software, improving the presentation of the subject, providing encouragement to teachers to use technology in their teaching more often, ease of navigation of the course through an ICT device, financial readiness of the institute to support ICT and learners with training are other factors that encourage the use of ICT.

Challenges Social Studies Teachers' face on the Use of ICT Facilities in Teaching of Social Studies.

A challenge is anything that retards the progress or achievement of any set objective or aim. It, therefore, means that the removal of one or more of these challenges or barriers such as the ones in ICT integration should assist perhaps significantly advance the process of integration. Computer integration in the classroom is the application of technology to assist, enhance, and extend student knowledge (Omwenga, 2004). Using ICT in education means more than simply teaching learners how to use computers. Technology is a means for improving education and not an end in itself.

A study conducted by Organization for Economic Cooperation Development (OECD) in 2009 confirmed that there are a number of barriers or challenges that inhibit the use of ICT in education. These barriers included an inconsistent number of computers to students, a deficit in maintenance and technical assistance and finally, a lack of computer skills and/or knowledge among teachers (OECD, 2009). Jenson, Lewis and Smith (2002) classified

these barriers as: limited equipment, inadequate skills, minimal support, time constraints and lack of interest or knowledge by teachers.

In a research report conducted by British Educational Communications and Technology Agency (BECTA) in 2004, a number of other important barriers were identified. These were: lack of confidence, accessibility, lack of time, fear of change, poor appreciation of the benefits of ICT and age. Ertmer (1999) concurs with Schoepp (2005), asserting that if teachers are aware of and understand such barriers, they can initiate strategies to overcome them.

Although valuable lessons may be learned from best practices around the world, there is no one formula for determining the optimal level of ICT integration in the educational system. Significant challenges that policymakers and planners, educators, education administrators, and other stakeholders need to consider include educational policy and planning, infrastructure, language and content, capacity building, and financing.

Research has classified these barriers in different ways. Several studies have divided the barriers into two categories: extrinsic and intrinsic. However, what was meant by extrinsic and intrinsic differed among studies. In one such study, Ertmer (1999) referred to extrinsic barriers as first order barriers citing as examples: lack of time, support, resources and training. She referred to intrinsic barriers as second order barriers, citing as examples: attitudes, beliefs, practices and resistance to change.

Balanskat et al (2006) classified barriers as ‘micro level’ (teacher attitude) and ‘meso level’ (institutional). He added a third category called ‘macro level’, to account for the wider educational system. Meanwhile, Pelgrum (2001) identified material barriers as a lack of real or physical

equipment and non-material barriers as somewhat intangible entities such as lack of knowledge, confidence or time.

The challenges that confront the successful integration of ICT into education will be looked at from two (2) major angles. This approach which was adopted from what the British Educational Communications and Technology Agency (BECTA) used in 2003 will firstly look at the barriers from the teachers' perspective. The second will consider the barriers that confront the school itself.

Teacher Related Barrier

The researcher is of the view that the teacher (s) is/are the principal actors or stakeholders in the learning process. This belief of the researcher is affirmed by the view of Baylor and Ritchies (2002) who posited that teacher related issues were crucial in determining ICT use in the classroom. Again, Gressard and Loyd (1985) asserted that teacher's attitude towards ICT is one of the key factors which determine successful integration, while Jegede (2008) recognizes the teacher as a key instigator in fostering ICT integration in education.

From the above, it is clear that the teacher is one key determinant factor among the others factors in the integration of ICT. It therefore implies from the above that the barriers of integration with relation to teachers can have a negative impact on the whole integration process. The following sessions will look at some of the teacher related challenges or barriers.

Lack of Knowledge or Competence

According to Bingimlas (2009) teacher competence refers primarily to the ability to integrate ICT into pedagogical practice. Lack of

knowledge/competence is regarded as a significant teacher related barrier to ICT integration. A teacher's lack of knowledge serves as a considerable challenge to the use of computers in teaching methods and practices. Tezci (2009) posits that if teachers have a high level of ICT knowledge, then there will be a higher level of ICT use in education. These barriers according to some researchers vary from country to country. Pelgrum (2001) found that lack of knowledge/competence in technology, among teachers in developing nations, is the primary obstacle to the uptake of ICT in education.

Lack of Confidence

Numerous studies carried out posit that the lack of confidence prevents teachers from using ICTs. According to a BECTA Reports in 2004, many teachers who are unskilled in ICT are not prepared to use them in the classroom or in front of students who might probably know more than them. This lack of confidence is further deepened with the expectation of students on the competence of the teacher in the use of ICTs. This is so because students are of the view that their teachers know more than them and with this at the back of the mind of the teacher if he/she is even having a fair knowledge about ICTs will not be willing to go and disgrace himself before the students.

The lack of confidence in the use of ICTs is in most instances accounted for by the inconsistency between training and usage. This is so because most teachers even if they have received training in the use of ICTs can still fail to integrate it into teaching. BECTA Report 2004 says that the lack of confidence is linked to other barriers affecting the use of ICT in education. The report mentioned the fear of ICT as a factor compromise the level of confidence. Other factors that were mentioned included the lack of

technical assistance which can lead to low confidence levels, lack of competence and the quality of training received.

According to Jegede, Dibu-Ojerinde and Llori (2007) as teachers become more appreciative of the use of ICTs as a pedagogical aid, attitudes and interest become positive. The rationale therefore, is that increased interest fosters commitment to honing skills and thereby boosting competence levels. Beggs (2000) posits that fear of failure is a possible cause of lack of confidence whereas Balanskat et al (2006) said the limitation in the knowledge base of the teacher in ICTs use make them feel anxious about using it and thus not confidence to use it in teaching. Some researchers are also of the view that the lack of confidence and experience with the use of technology influences the motivation of teachers in the use of ICTs. Cox et al (1999) found that teachers who have confidence in using ICT, identify that technologies are helpful in their teaching and personal work and that they need to use them more frequently.

From the above it can be concluded that when most of the barriers to the use of ICTs in education is removed many of the problems associated with lack of confidence will be resolved.

Fear

Computer anxiety or fear is a key barrier, limiting or preventing the use of ICT by teachers. Underlying these anxieties are a fear of humiliation when using computers and a fear of losing professional status through the downgrading of traditional teaching skills. According to a BECTAs 2004 Report, teachers who admitted to a lack of confidence ascribe this lack of confidence primarily to fear. According to several reports some teachers have

the fear that computers might challenge or compromise their vocation by downgrading their role. The researcher is of the opinion that if teachers are trained in ICT and ICT integration, they should realise, that rather than downgrading pedagogical skills, ICT aims to enhance those skills, in the same way it aims to enhance the learning process and skills acquisition.

Lack of Training

A full and complete integration of the use ICT in education requires high quality frequent training and professional development. If this training is not provided, then attempts at integration will inevitably be unsuccessful. This is significant, as according to most researchers. Another barrier that is frequently cited, is the lack of effective training. A study by Pelgrum in 2001 revealed that there were not enough training opportunities for teachers in the use of ICTs in the classroom.

The training of teachers in the integration of ICT in the learning and teaching process is a difficult one. This is so because it involves a number of complex factors in order to render the training effective. These complex factors include finding the time for training, training in pedagogy, skills training and the use of ICT in the teacher's initial training (Bingimlas 2009).

BECTA (2004) concurs, asserting that training is particularly complex, because it is important to consider several components to ensure the effectiveness of the training. A similar study conducted by Cox et al (1999) argues that ICT training for teachers needs to incorporate pedagogical aspects. This study concluded that when teachers received basic ICT training without considering the pedagogical aspects of ICT, they still did not know how to use ICT in class. Schoepp (2005) maintains that if new technology is going to be

integrated into education, teachers should receive training on how to use the specific ICTs, while Trotter (1999) concludes that training in ICT integration must be preceded by and supplemented with basic skills training. Research by Gomes (2005) also concluded that lack of training in digital literacy, lack of pedagogic and didactic training in how to use ICT in the classroom and lack of training concerning the use of technologies in specific subject areas, were obstacles to the use of new technologies in classroom practice.

Cox et al (1999) again assert that if teachers are to be convinced of the value in using ICT in their teaching, their training should focus on pedagogical issues. This in the view of the researcher is due to the fact that found that even after teachers had attended professional development courses in ICT, they still did not know how to effectively use ICT in their classrooms. This was because too much emphasis was placed on acquiring technical ICT skills during training, as opposed to skills in how to incorporate ICT into the curriculum.

Some studies assert that attention must be given to both skills training and pedagogical training (Becta 2004; Schoepp, 2005; Snoeyink and Ertmer, 2001). According to Newhouse (2002), some training is still needed for teachers to develop appropriate skills, knowledge and attitudes, regarding the effective use of computers to support learning by their students. He argued that this also requires continuing professional development, to maintain these appropriate skills and knowledge.

According to (Osborne and Hennessy 2003) when there are new tools and approaches in education, teacher training is essential if they are to integrate them into their teaching. In conclusion, the researcher is of the opinion that enough training can address some of the barriers in the integration

of the use of ICTs in the teaching and learning process. This is because acquiring the necessary skills will enhance their knowledge base and competence and by extension the level of confidence. The result of this is that it would in the long run reduce the fear of ICT and the anxieties related to student expectations and perceptions.

Extent of Previous ICT Experience

Poor previous ICT experience among teachers can clearly be regarded as a very real barrier to ICT integration in the classroom. Drent and Meelissen (2008) posit that solid experience in the use of ICT and the changes related to ICT, support the development of a learner centered pedagogical practice, while Becker (1994a) views substantial previous computer use by teachers, as one of the key determinants, in his classification of teachers, as either 'exemplary computer-using' or 'non-exemplary computer-using.

Difficulty in Changing Teaching Method (Pedagogy)

Teachers have to accept that the widespread use of ICT in schools is having an impact on teaching methods and requires a significant rethinking of approach. Beckar (2000) describes two main teaching methods and their effects on the ways in which ICT is used in lessons. Traditional transmission institution assumes that students will learn through teacher explanation or reading from texts. Skills are learnt through practicing skill in a sequence prescribed by the teacher. Constructivist institutions assume that understanding comes from relating new ideas to the learners' prior beliefs skills acquisition comes in as unstructured way as new skills are used as required to solve practical problems.

In conclusion one could deduce that using ICT in lessons, the constructivist approach is more likely to lead successful outcomes. Furthermore, teachers with the most constructivist philosophies tend to use computers more often and in a more challenging way both in classroom and as users themselves.

Age

The researcher's personal observation has it that the age of an individual is a factor in the persons quest to adapt to changes, more especially in the areas of technology. It is against this backdrop that this literature is being reviewed to find out the view of other researchers. Kumar, Rose and D'SIiva (2008) posited in his study with some teachers that age is a significant factor to the use of ICT. The researcher concurs with this but believes that the age factor in relation to the use of ICTs is not only peculiar to teachers in the classroom but also permeates all spheres of life.

Young (2000) asserts that younger less experienced teachers use computers more, because they are more likely to be computer fluent, had more technologically rich teacher training and are less likely to be limited by previous habits, perceptions or attitudes, than older teachers. Lee (1997) points out that many older teachers have not had any computer education when training and as a result are in need of training to allow them to make use of computers in their work.

Cavas, Cavas, Karaoglan and Kisla (2009) revealed that there is a relationship between teacher's age and their computer attitudes. Another study by Korte and Husing (2007) conclude that younger teachers appear to be less sceptical about the benefits of ICT in learning. A report by the European

Commission in 2002 found that age is a factor in the use of computers and the internet, arguing that the percentage of teachers using computers falls as their age increases, although the report acknowledged that the importance of this factor is declining.

Bradley and Russell (1997) point out that, although computer anxiety may increase with age, this does not mean that training or professional development should be specifically targeted at older teachers. They strongly dispute the notion that because computer anxiety may increase with age, younger teachers are unlikely to need training in ICT. Despite this, a substantial body of research literature strongly argues that age has no bearing on the use of ICT by teachers (Al Senaidi, Lin & Poirot 2009; Lau & Sim 2008).

Institution Related Barriers

The environment or conditions prevailing in the various institutions or schools can also be a factor that will inhibit the integration of ICT into the learning and teaching process. These conditions can be varied depending on where the school is located and the class or category of the school. Some of these include but not limited to the following: technical problems and shortage of computers in laboratory, lack of detailed planned into how ICT can be used to enhance the teaching and learning, timetable difficulties, willingness of school authorities to provide the needed funds when the need arises

Technical problems and Shortage of computers in laboratory (ICT Infrastructure in place)

It is important to acknowledge that ICT can have technical problems and contingency planning is necessary to ensure alternative strategies are in

place. Where the infrastructure and the platform for the application are unreliable, the output may be affected and this can adversely affect student motivation. As computers are becoming more sophisticated and the range of software used by schools continues it increase, the schools must recognize the need to employ more and highly qualified technical staff. However, with pleasure on budgets and competition from the commercial sector for the best staff, it is becoming increasingly difficult for schools to attract and retain technical staff with the appropriate skills and experience.

Lack of detailed planning into how ICT could be used to enhance the teaching and learning process

Much of the research highlights the need to plan carefully the use of ICT in lessons. Sutherland (2004) sum this up as, "ICT alone does not enhance learning. How ICT is incorporated into learning activities is what is important". Abbott, Lachs and Williams (2001) also stress the importance of detailed lesson planning when using ICT and that, students must be encouraged to understand the process involved rather than simply focusing on the output. Some teachers may use ICT as a way of encouraging independent learning skill needs to be planned and supervised with the teacher directing the student's activities and outputs ICT though is an effective tool in the hands of an effective teacher, and not a panacea in its own right. It would seem that prerequisite for success is the subject knowledge of the teacher and his ability to weave the use of ICT into the existing curriculum. Becta (2001) suggested that success comes when teachers use applications that open up new ways of working. It acknowledges that this involves planning and imagination, and the result will be "spectacular".

Timetable Difficulties

Incorporating ICT across curriculum requires careful timetabling and corporation among department. Sutherland, Armstrong, Barnes, Brawn, Breeze, Matthewman, Olivero, Taylor, Triggs, Wishart and John (2004) point out that in Science department; it may not be possible to move practical classes to ICT because of health and safety consideration or site computers in Science laboratory due to space constraints. On other subjects, the time ICT suites are available may not suit the schemes of work planned by the teacher's. Hence much more cross-curricular and departmental planning is required than most schools do in the past.

Empirical Review

Availability of ICT Facilities in Teaching of Social Studies

Yusuf, Bashir and Dare (2013) conducted a study on assessment of the availability, utilization and management of ICT facilities in teaching English language in secondary schools in Kaduna State, Nigeria. The study adopted a descriptive survey research design. A questionnaire titled "Availability, Utilization and Management of Information and Communication Technology in teaching English Language in Secondary Schools" was used for data collection. Twenty randomly selected secondary schools from Kaduna metropolis were used for the study. A total of 100 teachers participated by responding to the items on the questionnaire. The findings of the study revealed that there is a dearth of ICT facilities in secondary schools in Kaduna as there are only very few of such facilities available in most of the schools visited. This indicates that ICT facilities are not readily available in schools. Teachers do not have enough computers, no interactive boards educational

softwares or multimedia facilities. Projectors and e-libraries are available only in a few schools.

Ayebi-Arthur, Aidoo and Wilson (2009) conducted a study on utilization of the Internet in senior high schools in the Cape Coast Metropolis in the Central Region of Ghana. The sample consisted of 100 students and 25 teachers in three Senior High Schools. The stratified random sampling technique was used to select the three schools to represent the school types (co-ed, girls, boys, schools) with one school in each stratum, respectively. For each stratum, respondents were selected using the simple random technique. Structured questionnaires consisting of closed items were used to collect the data from the sample. Both student and teachers were asked whether they have access to the internet. The findings show that majority of the teachers had access to the internet. Again, 70% of the students had access to the internet. This shows that majority of the students and teachers had access to the internet.

Adebi-Caesar (2012) conducted a descriptive study on assessment of ICT situation in Senior High Schools in the Lower Manya Krobo District. A total sample of 154 teachers took part in the studies. The four (4) schools were considered as strata. The main instrument used for the study was a questionnaire Proportional allocation was then used in calculating the number of respondents to be selected from each school. With the help of the headmaster and his assistants the teachers of all the schools used in the study were called to their staff common room and with a simple random sampling the questionnaire was administered. Teachers were questioned on extent of availability of ICT tools or equipments in the schools. The study revealed that

97.9% of the teachers in all the schools had insufficient computers and resources and only 2.1% agreed they had enough computers. Again when teachers questioned whether they use computers in their school 90.7% responded they never made use of computers in their school and only 9.3% agreed they made use of them. This clearly reveals that all the schools used in the study do not have enough computers for studies.

Agyei and Voogt (2011) conducted a study on ICT use in the teaching of mathematics: Implications for professional development of pre-service teachers in Ghana. In-service teachers were asked if certain ICT facilities were available. Interviews and survey were used for data collection. A total of 180 educators constituting of 60 in-service mathematics teachers and 120 pre-service mathematics teachers participated in the study. About 98% of the in-service teachers from the 16 SHS reported having at least one computer laboratory in their schools. Some teachers also indicated that Parents-Teachers Association (PTA) had been helpful in providing computers in their schools. Further questions were asked to ascertain how accessible these facilities were. Relatively low figures: (access to computers (office/computer lab) was 21%, access to computers (staff common room/Library) was 13% and internet connectivity was 46%) indicating low accessibilities of computer facilities were observed. The teachers indicated further that computer laboratories were used mainly for information technology (IT) lessons which were compulsory for all students; making it difficult to access facilities in computer lab for personal use or other purposes.

Teachers' use of ICT Facilities in Teaching Social Studies

Ocak and Akdemir (2008) in Turkey conducted a study on primary school science teachers' use of computer applications. The snowball sampling was utilized to identify participants for the study. The total of 63 science teachers agreed to participate in the study. A survey developed by Demiraslan and Usluel (2005) was adapted for the data collection in this study. Results demonstrated that improving the computer literacy of science teachers seemed to increase science teachers' computer use and consequently increase their integration of computer applications as an instructional tool. Internet, email and educational software, Compact Discs (CDs) were found to be used frequently in the classrooms.

Ayebi-Arthur, Aidoo and Wilson (2009) conducted a study on utilization of the Internet in senior high schools in the Cape Coast Metropolis in the Central Region of Ghana. The sample consisted of 100 students and 25 teachers in three Senior High Schools. The stratified random sampling technique was used to select the three schools to represent the school types (co-ed, girls, boys, schools) with one school in each stratum, respectively. For each stratum, respondents were selected using the simple random technique. Structured questionnaires consisting of closed items were used to collect the data from the sample. Teachers were asked how they use the available internet. The findings showed that majority of teachers did have access to the internet but hardly used it. For the few who used it, very often used it for personal development. Also 28% often used it for communicating with other teachers and making lesson presentations.

A study conducted by Amenyedzi, Lartey and Dzomeku (2011) on the use of computers and internet as supplementary source of educational

material: a case study of the senior high schools in the Tema metropolis in Ghana. The study utilized quantitative and qualitative methodology for data collection. Stratified sampling method was used to select students and teachers. Three different sets of questionnaires were used for data collection from students, teachers and heads of schools. A total of 120 students were selected from the three schools. Sixty tutors were also selected from the three schools for the study. Respondents (students and teachers) from each program offered in the selected schools were chosen randomly. The study used structured questionnaires and interviews. Teachers were questioned on their use of computers in teaching. The study revealed that about 24% of teachers use the computer for collection of academic data of the students; about 11% type test items of their students with the computer, about 13% use it in teaching as Teaching and Learning Materials (TLMs), practical demonstration or for drill and practice. Less than 35% of teachers use ICT for research work whereas about 16% use the facility for entertainment.

Social Studies Teachers' Perception of the use of ICT Facilities in Teaching Social Studies.

In Malaysia, a study was conducted by Sim and Lau (2014) on teachers' perceptions of the use of ICT as an instructional tool in Mathematics and Science. Teachers were questioned on their perceptions of the use of ICT in classrooms. The study deployed a survey method to collect basic data on the current practice of ICT in the teaching of Science and Mathematics at secondary schools, and to investigate teachers' needs for training and support in relation to the effective use of ICT. The study focus on the Science and Mathematics teachers who are currently teaching at 21 government secondary

schools in Kuching, Sarawak. Two hundred and fifty copies of questionnaires were randomly distributed to Science and Mathematics teachers from 18 government schools located in Kuching.

The findings showed that the respondents broadly agreed that utilization of ICT makes them more effective in their teaching (75%), and more organized in their work (80%), rely less upon textbooks (37%), and better able to meet the varying needs of students (48%). While 39.2% of the respondents broadly agreed that with the uptake of ICT they need longer blocks of time for instruction, 43.4% of them disagreed that they give up too much instructional responsibility with the use of technology. In general, respondents broadly agreed that with the use of internet and technology, their lesson plans are richer (55%), and the way they organize classroom activities has changed (56%). A further positive sign is 85% of them indicated that they would like to integrate more ICT applications into their teaching. Use of ICTs such as computer technology and internet is intended to enable teachers to facilitate learning more effectively and enhance students' understanding of concepts which are expected to translate into expansion of Knowledge and improved examination outcomes.

In Ghana, a study was conducted by Amengor (2011) on history teachers' perception of ICT in promoting teaching and learning. The study adopted a descriptive research design. Questionnaire was used in collecting the data for the study in both Kumasi and Cape Coast Metropolis. The study conducted a census survey among the 78 history teachers. The study revealed that 95.6% believe ICT make teaching more effective, 80.6% believe ICT helps to meet the varying needs of students and 85.1% believe ICT

increases their productivity. The results clearly show that respondents had fairly good perception towards ICT.

Buabeng-Andoh (2012) looked at an exploration of teachers' skills, perceptions and practices of ICT in teaching and learning in the Ghanaian second-cycle schools. The study was conducted in public second-cycle institutions. Two hundred and thirty-one teachers were selected from fourteen schools who participated in the study. A simple random sampling technique was used to select the teachers in second-cycle institutions who participated in this study. Questionnaire was used in collecting the data for the study. The findings showed that majority of the teachers perceived that ICT can offer opportunities to teachers for obtaining educational resources from the internet to enrich course content and also can improve teaching and learning processes. The majority of the teachers also agreed or strongly agreed that ICT can enhance students' participation and feedback to teachers (90.9%) and improve students' collaboration (90.4%). On the other hand, ICT can improve students' language writing skills (76.2%) was perceived as the lowest. In general teachers' perceptions of the application of ICT in teaching and learning environment were positive.

Teachers-Factors that Influence the use of ICT Facilities in the Teaching of Social Studies

Hadley and Sheingold (1993) reported the results of a survey conducted in the USA during 1989. Data were obtained from over 600 teachers in almost as many schools who had been nominated by principals as being "known for their efforts in integrating computer technology into their teaching". As many as 88% of the teachers indicated that computers had made a difference to their teaching. Overall, the changes included higher

expectations for students' work, greater opportunity to support students working individually and independently and a change from teacher-centred to student-centred classrooms with the teacher acting more as a coach than as information dispenser. The data showed discernible patterns in the evolution of teachers' practices with computers over time. Overall the pattern appeared to be one in which teachers began with approaches that were similar to familiar practices like the use of printed workbooks and, as they gained experience, decreased these uses in favour of approaches that afforded more opportunity for self-generated learning by students.

In summarising their results, Hadley and Sheingold (1993) noted that the achievements of these teachers appeared to be the result of a combination of factors, namely, the teachers' own motivation and commitment, peer support for their efforts and access to technology. Multiple profiles of accomplishment emerged, suggesting that "integration of computers into classrooms is a local phenomenon that is highly influenced by the particular context" (p. 299) despite being influenced by the same key factors. The implication seemed to be that there is no simple formula for computer integration and that typically it may require five to six years for a teacher to adapt to teaching with computers.

In Ghana a study was conducted by Mereku, Yidana, Hordzi, Tete-Mensah and Williams (2009) on Ghana's Report on ICT. Five institutions which were representative of the nation's pre-tertiary and tertiary educational institutions were purposively selected for the study. The study utilized quantitative and qualitative methodology for data collection. The study made use of structured questionnaire and interview schedules for students,

educators, and school administrators. The study revealed that, availability of ICT syllabuses/manual, ICT teachers who are willing to provide educators and learners with training and availability of computers and computer laboratories that can be accessed periodically are some of the factors that encourage the usage of ICT in tertiary institutions.

In Mekong Delta, Vietnam a study was conducted by Mai and Hong (2014) on factors affecting secondary school English teachers' adoption of technologies in Southwest Vietnam. The study aimed to seek rich descriptions of the current environment of ICT integration and teaching practices accompanying it in English Language Teaching (ELT) at the secondary level; thus, a qualitative research design was used. The main data collection methods were open-ended questionnaire and semi structured interviews in English. Different sources of information and various types of data collection methods were used to minimize the biases that might occur in qualitative research.

Fifty English teachers from secondary schools in Can Tho and Dong Thap agreed to participate in the research. The open-ended questionnaire was adapted from a number of previous studies in the related area of ICT in teaching. The findings of this study indicate that external factors have a significant impact on teachers' uptake and integration of ICT in their classrooms. The first influential factor refers to ICT availability and accessibility. In addition, technical support is also necessary. The teachers in these provinces are also influenced by their colleagues' activities. The school culture motivates or inhibits the teachers' willingness to use ICT. The teachers indicate that they expect more encouragement from their colleagues in their

uptake of ICT. Internal factors are more influential in enabling teachers' ICT adoption and implementation in ELT. Their beliefs about the positive effects and benefits of ICT on their instruction and their students' performance motivate them to adopt and integrate ICT in their teaching. In addition, their personal interests contribute to motivating them to use more ICT in class.

Challenges Social Studies Teachers' face on the Use of ICT Facilities in Teaching of Social Studies.

Olufemi, Olukayode and Oladele (2013) conducted a study to investigate the Challenges of Information and Communication Technology (ICT) in secondary schools in Ondo state. It sought to find out the level of access to ICT among secondary school teachers and students. Also, the study investigated the level of utilization of ICT for instructional purposes and the attitude of teachers and students towards ICT utilization of ICT in secondary schools. The study adopted the descriptive survey design. The sample for the study consisted of 450 teachers randomly selected from two hundred and ninety-six (296) secondary schools in the eighteen Local Government Areas of Ondo State. A combination of multistage, stratified and simple random sampling technique was used in selecting the sample. Research instrument employed was the questionnaire. The data obtained were analysed using frequency counts, percentages, mean and bar chart. The result showed that the majority of the respondents agreed on the whole that teacher's lack of ICT skills, lack of confidence in using ICT, Insufficient knowledge of how to use ICT equipment, unavailability of infrastructure, lack of knowledge of how to evaluate the use and the role played by ICT in teaching and learning and insufficient knowledge of appropriate software

are factors hindering the effective utilization of ICT facilities for instructional purposes.

Adebi-Caesar (2012) conducted a descriptive study on assessment of ICT situation in Senior High Schools in the Lower Manya Krobo District. A total sample of 154 teachers took part in the studies. The four (4) schools were considered as strata. The main instrument used for the study was a questionnaire Proportional allocation was then used in calculating the number of respondents to be selected from each school. With the help of the headmaster and his assistants the teachers of all the schools used in the study were called to their staff common room and with a simple random sampling the questionnaire was administered.

Teachers were questioned on the barriers that hindered them from integrating ICT in their teaching. The study revealed that 128 (12.4%) responses each respectively went in favour of lack of knowledge about computers and the lack of training as the reasons that is preventing the respondents from using or introducing the use of ICTs in their teaching and learning. 126 (12.2% and 102 (9.9%) of the response also went in favour of little previous experience with computers and their age respectively as the factors restraining respondents from using ICTs to teach. 101 (9.8%) and 98 (9.5%) responses respectively went to the fear in the use of the ICTs and the lack of confidence as the inhibiting factors in the use of ICTs in the classrooms. 83 (8.1%) and 77 (7.5%) responses went in favour of lack of time to use the computers and not being sure of how useful computers can be as the factors that hinder the use of ICT in the classroom. Another 71 (6.9) and 68 (6.6%) of the responses went to ‘no support if something goes wrong with the

computer and their headmasters or management not being concern about whether computers are used to teach or not as some of the inhibiting factors. The study revealed that three (3) major barriers prevented the use of ICTs in Senior High Schools classrooms are the lack of training in the usage of the ICTs, lack of knowledge about the computers or the ICTs and finally the little or no previous experience in the use of the ICTs. On the other hand, two (2) factors that do not prevent teachers from using the ICTs in the classrooms are computer equipment is reliable and computer not accessible.

A study was conducted by Afful-Dadzie (2010) on the use of ICT by students and teachers in senior high schools in the Sekondi-Takoradi Metropolis. The study employed a descriptive survey as the research design. The data collection instrument for the study was a questionnaire for students and teachers and an observation checklist. Population of the study was derived from students and teachers of all the eleven public senior high schools in the Sekondi-Takoradi Metropolis. Sampling selection of the teachers and student used the lottery method.

With regard to the barriers to the use of ICT in the senior high schools in the catchment area, the teachers agreed that the integration of ICT is associated with uncertainty. They did not know how to incorporate ICT into the normal teaching process. The study also revealed that teacher did not want to change their habit of teaching in the traditional way to the use of ICT as they agreed that force of habit is a hindrance to the interrogation of ICT. Moreover, the study revealed that inadequate support network is a barrier to the integration of ICT. Inadequate follow- up support was also seen to be a hindrance to the integration of ICT in the teaching and learning process. On

the part of the students, there was agreement on all the issues raised here as being the barriers to the integration of ICT.

Summary

Looking at the literature reviewed above, it could be seen that, ICT has undoubted potential, to be influential in changing teaching methodologies. Again, availability of ICT facilities leads to the effective utilisation by both teachers and student in the teaching learning process. The review also showed that teachers use ICT facilities for preparing teaching learning materials, practical demonstration, lesson notes and among others. Also, teachers' perception is seen to be influential on the utilisation of ICT facilities. Some of the perceived benefits of using ICT facilities include giving to wider learning content and resources and allowing students to become more motivated, more active and independent, and more attentive in teaching learning process. Furthermore, the encouraging factors that influence teachers' innovative use of ICT facilities in the teaching of their subject can be divided into two sub-categories, namely, school factors and teacher factors. Finally, the review has examined a number of different barriers that may prevent the integration of ICT into teaching and learning processes. These barriers may be teacher based, school based or indeed a combination of both. Understanding these barriers and how they impact on teacher use of ICT can assist educators in deciding how to tackle them. These were the issues that were of interest to the present study.

CHAPTER THREE

METHODOLOGY

Overview

In this chapter, the researcher describes the research methodology adopted for the study. The researcher describes the research design; the population; sample and sampling technique; instrument used in the study; validity and reliability of instrument; the data collection procedure and the data analysis.

Research Design

Research design is a plan or a blue print which specifies how data relating to a given problem should be collected and analyzed. It provides the procedural outline for the conduct of any investigation (De Vos, 1998). Gay (1992) remarked that research design indicates the basic structure of a study, the nature of the hypothesis and the variables involved in the study. The research design adopted for this study was descriptive survey. The descriptive survey was an attempt to collect data from members of a population in order to determine the current status of that population with respect to one or more variables (Gray, 2004).

The relevance of the descriptive approach to research in the field of education has been addressed by scholars such as Fraenkel and Wallen (2003). These scholars agree on the view that the descriptive approach provides

opportunities for a researcher to gain valuable insights into the current status of phenomenon with respect to variables or conditions in a given situation. From another perspective, Sincich (1993) stresses that the descriptive survey method is useful for investigating a variety of educational problems including the assessment of opinions, demographic information, attitudes, procedures and conditions.

This implies that descriptive information is mostly collected through the distribution of questionnaires, conducting interviews or doing observations. Akinboye (1986) agrees with Sincich's (1993) view when he pointed out that a descriptive survey research is done when investigators start their researches from doing observations and strategically study existing conditions of specific events in the real world and attempt to describe the scenes that exist. Although this design has some loopholes such as difficulty in getting respondents to answer questions thoughtfully and honestly, it was considered the best for the study since it deals with interpreting the relationship among variables and describing their relationships (Gay, 1992).

Descriptive approach was chosen for the study because such approach is very good at producing "information on groups and phenomenon that already exist" (Fink, 2003, p. 22). It was my hope to seek the current status with regard to availability and utilization of ICT facilities in teaching social studies in senior high school of Sekondi-Takoradi Metropolis. This is in line with Graziano and Raulin's (1997) views about conducting descriptive study.

Population

Population of the study consisted of all the social studies teachers of all the twelve public senior high schools in the Sekondi Takoradi Metropolis

which are Fijai Senior High School, St John's School, Archbishop Porter Girls Senior High School, Takoradi Secondary Technical School, Sekondi College, Takoradi Secondary School, Ahantaman Senior High School, Diabene Secondary Technical, Adiembra Senior High School, Bompeh Secondary Technical, Takoradi Technical Institute and Methodist Senior High School. In all the twelve SHS, the social studies teachers were 100. This constituted the accessible population of the study.

Sample and Sampling Procedure

Considering the target population in question (social studies teachers in Sekondi-Takoradi Metropolis), it was most appropriate to use the census survey method. The distribution of the sampled schools for social studies teachers in Sekondi-Takoradi Metropolis is shown in Table 1.

Table 1: Distribution of Sampled Schools

Name of school	Number of social studies teachers 2014/2015 academic year
Ahantaman Senior High School	7
Archbishop Porter Girls Senior High School	7
Sekondi College	9
Fijai Senior High School	7
Adiembra Senior High School	9
Takoradi Senior High School	10
Methodist Senior High School	7
Bompeh Secondary Technical School	8
Diabene Secondary Technical School	10
Saint John's Senior High School	9
Ghana Secondary Technical School	10
Takoradi Technical Institute	7
Total	**100**

Source: Public Senior High School in Sekondi Takoradi (G.E.S), 2014

Research instrument

The research instrument used was a questionnaire. The questionnaire was used to elicit information from social studies teachers in the selected Senior High Schools. The self-administered questionnaire for teachers was made up of fifty-five (55) items, (see Appendix B). The items consisted of both close ended and open ended questionnaire. There were five (5) sections in the questionnaire. Section 'A' contained items used to elicit the background information about teachers and teaching experience so far as the teaching of social studies was concerned. Section 'B' sought information about the availability of ICT facilities in teaching social studies in SHS. Section 'C' contained general information about the use ICT facilities in teaching social studies in SHS. Section 'D' contained information about the perceptions of teachers towards the use of ICT in the teaching of social studies in SHS. Section 'E' contained information on teacher factors (knowledge, competencies, teaching experience) on the use of ICT facilities in teaching of social studies in SHS and Section 'F' contained information on challenges social studies teachers face in using ICT facilities in teaching of social studies in SHS.

For accurate representation of data, items on a four and two point Likert type questionnaire were also developed. The Likert scale has been found to be the most suitable type of instrument for the measurement of attitudes and perceptions. This is because it enables respondents to indicate their degree of agreement with a series of statements on how respondents feel about an issue (Bryman, 2004). It was the most preferred instrument because it was easy to construct, administer and score (Borg & Gall, 1983).

Kerlinger (1973) observed that questionnaires are widely used for collecting data in educational research. It is very effective for securing factual information about practices and conditions of which the respondents are presumed to have knowledge about. It is also used to enquiring opinions and attitudes about the topic under discussion. The questionnaire was used because it has the following advantages over other instruments: it has high response rate. It also simplifies the stages of data analysis. Its weaknesses may be seen in the areas of the fact that respondents may not provide appropriate answers to the items since the method usually involves the use of structured items.

Pilot Testing of Instrument

The need to get the validity, reliability and appropriateness of the questionnaire instrument, a pilot-test of the instrument was conducted at Shama Senior School and Daboase Senior High Technical School in the Shama District. The two schools were selected for the pre-testing because of proximity and some identifiable characteristics of interest and similarities. All the schools averagely are on the same scale and are all situated in the area. Nevell (1993) stressed that the importance of scrutinizing data gathering instrument is to identify ambiguity and misleading questions and for instructions and suggesting improvements. Minor changes were made after the pre-test, in collaboration with the supervisor of the study. The reliability coefficient for all sections (B, C, D, E) was computed for the main questionnaire, which gave a Cronbach Alpha Coefficient of 0.74, 0.86, 0.81 and 0.78 respectively. The reliability for the main questionnaire was 0.865. The reliability coefficient for all sections (B, C, D, E) was computed for the pilot test questionnaire, which gave a Cronbach Alpha Coefficient of 0.75,

0.79, 0.90 and 0.864 respectively. The reliability coefficient of 0.754 was obtained.

Data Collection Procedure

The administration of the instrument began in March, 2007. To facilitate administration of the instrument, a cover letter was obtained from the Department of Arts and Social Sciences Education, College of Education Studies, UCC to the various Heads of the Selected Senior High Schools (see Appendix A). To further enhance rapport between the researcher and the respondents of the selected schools, with the permission of the head teachers, the teachers were briefed on the objectives of the study. This helped to obtain the necessary support and co-operation of teachers to conduct the study. A second visit to each school was used for the administration of the questionnaire to teachers. The instrument for the teachers was administered by the researcher in person. In each school, time was allowed for each teacher to respond to the items and they were also informed that the completed instrument would be collected within a week's time. This was to ensure that teachers had ample time to respond to all items on the questionnaire. Only 80 out of the 100 copies of the questionnaire which were administered were returned. Out of this only 72 were completely filled. Thus a total of 72 copies of the questionnaire were duly completed which represent 72% of the total number of questionnaire administered, collected and utilized for the purpose of the study.

Data Analysis

Data were handled in three stages – the editing of the questionnaires, coding the responses and the data analysis stage. The editing stage involved

checking of inaccuracy of the questionnaires after they had been retrieved to ascertain whether all the items had been responded to. This stage also enabled the researcher to create categories for responses and also discard irrelevant responses. The third stage was the data analysis stage. The data were transferred to Statistical Product for Service Solution (SPSS spreadsheet) and analyzed with the use of descriptive statistics (Mean, standard deviation, frequencies and percentages) and inferential statistics (independent sample t-test).

Section A of the biographic data was analysed using frequency and percentages. Research question 1 was analysed and discussed using frequency, percentages, mean and standard deviation. Research questions 2, 3, 4 and 5 were analysed and discussed using mean and standard deviations. The mean of means was also used to provide summary for the questionnaire. That is, each of the major questions posed in the research was assessed in summarized form to know the extent at which the social studies programme was being transacted generally. The hypothesis was analysed using independent sample t-test with the assumptions not violated.

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter presents the findings and the discussion of the main data. One hundred (100) questionnaires were distributed to the social studies teachers and 72 were retuned. The analysis was done using the 72 returned questionnaire. The data were divided into two fold. The first fold was background information of the respondents and the second part was the analysis of the research questions.

Background Information on Respondents

The background information of the respondents was sought. These included the sex, age distribution, marital Status, highest academic qualification and teaching experience in social studies. The results are presented in Figure below.

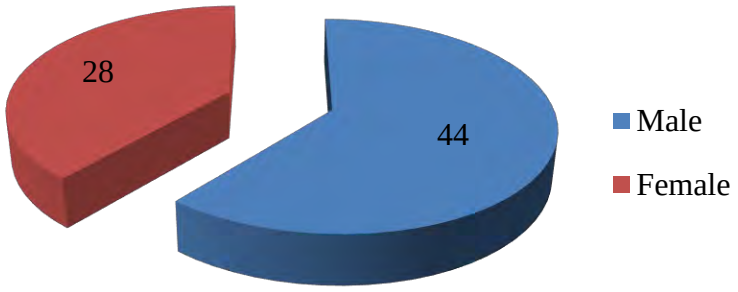

Figure 3: Gender distribution of Respondents (n=72)

As shown in Figure 3, the majority (n=44; 61.1%) of the respondents were male, while 28 of the respondents representing 38.9% were female. This result implies that the male social studies teachers in Sekondi-Takoradi exceeds their female counterpart.

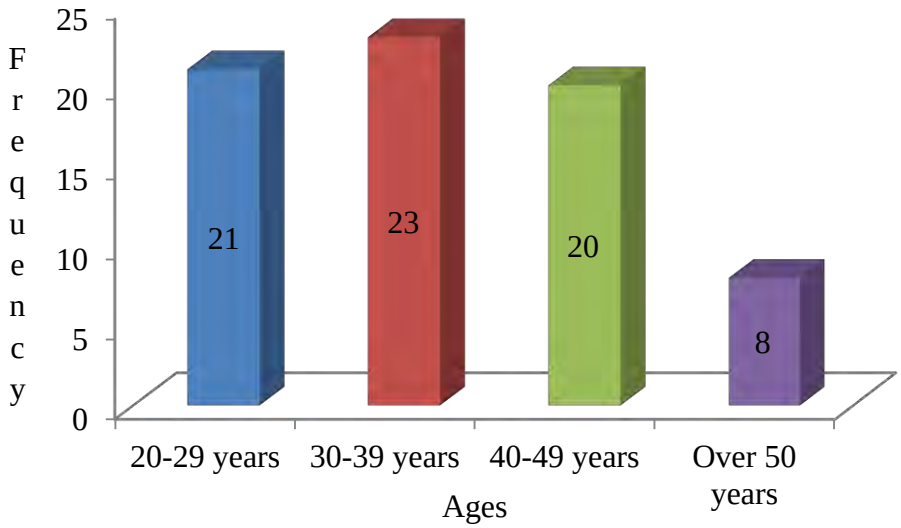

Figure 4: Age distribution of Respondents (n=72)

As shown in Figure 4, the age of the respondents ranged from 20 years to over 50 years. It was found that 23 of them representing 31.9% aged between 30-39 years, followed by 21 (29.2%) and 20 (27.8%) of the respondents were found to fall within the age group of 20-29 years and 40-49 years respectively. This finding implies that the respondents are mature and they would have adequate knowledge on ICT. They would stand in the position to tell more whether ICT is being use in the schools.

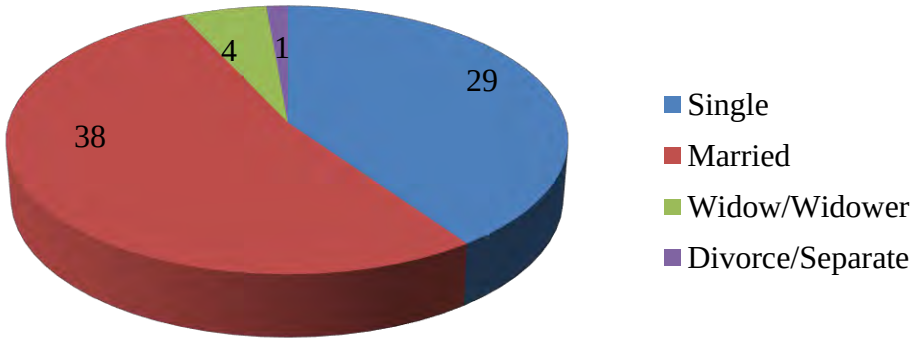

Figure 5: Marital status of the respondents (n=72)

Figure 5 indicates the married status of the respondents. It was observed that the majority (n=38; 52.8) of the respondents were married. This was followed by 29 (40.3%) of the respondents who indicated that they were single.

Table 2: Academic Qualification of the Respondents

Teachers Qualification	No.	%
Diploma/HND	5	7
B.ED degree	32	44.4
B.A degree	18	25
M.Phil. / M.A / M.ED	17	23.6
Total	**72**	**100**

Source: Field Data, May, 2015

With regard to the academic qualification of the respondents, it was noted that 32 of the social studies teachers, representing 44.4% had attained Bachelor of Education (B.Ed). This was followed by 18 (25.0%) of the

respondents who were found to have attained Bachelor of Arts (B. A), while 17 (23.6%) and 5 (7%) of them indicated that they have attained masters' degree in Arts, Education and Masters of Philosophy and Diploma/HND respectively. This result implies that majority of the teachers qualified as social teachers and they would have much knowledge and experience in teaching the subject. Hence, they stand in a better position to convey whether ICT facilities are available in the school and also whether they use them in their instructional process.

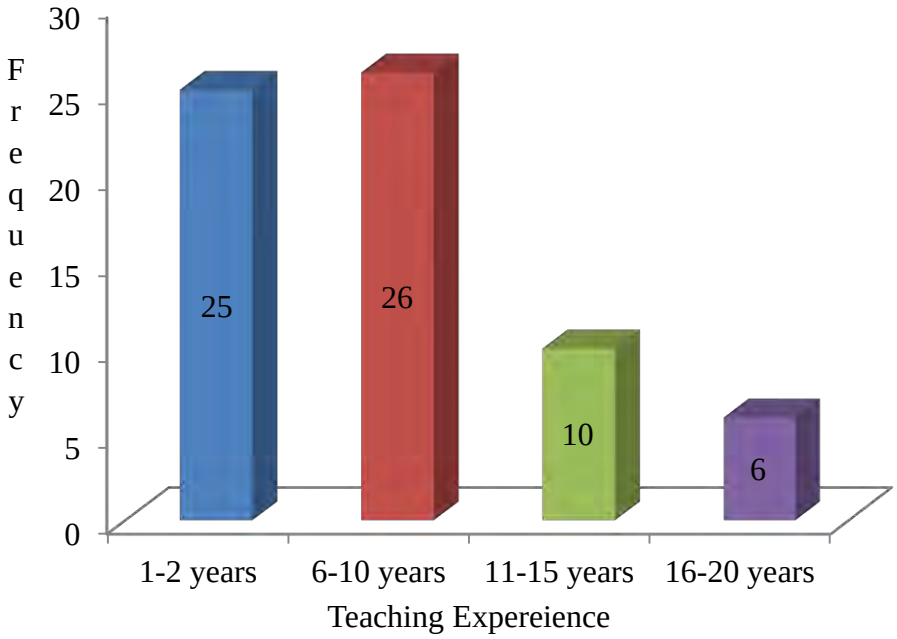

Figure 6: Teaching Experience of Respondents (n=72)

As evident in Figure 6, the result of the data revealed that 26 (36.15%) of the respondents have been teaching social studies for 6-10 years, followed by 25 (34.7%) of the respondent who reported that they have been teaching social studies for 1-5 years while 10 (13.9%) and 6 (8.3%) of the respondents indicated that they have been teaching the subject for 11-15 years

and 16-20 years respectively. This result indicates that most of the teachers have much experience in teaching of the social studies and they would know the benefits of integrating ICT in the teaching of the subjects.

Table 3: Teachers' Knowledge on ICT Facilities (n=72)

Statement	Sub-Scale	N	%
Have you been using ICT facilities in your teaching	Never used	23	31.9
	Rarely use	14	19.4
	Sometimes use	19	26.4
	Often use	12	16.7
	Very often use	3	4.2
Did you receive ICT training before joining the teaching profession	Yes	43	59.7
	No	29	40.3
Did you receive any ICT education and Training in your School	Yes	39	54.2
	No	33	45.8

Source: Field Data, May, 2015

As shown in Table 3, the respondents were asked whether they have been using ICT facilities in teaching social studies. It was found that 23 of them representing 31.9% revealed that they have never used ICT before. This was followed by 19 (26.4%) of the respondents who reported that they sometimes used ICT facilities in teaching the subjects while 14 (19.4%) and 12 respondents representing (16.7%) indicated that they rarely use and often use ICT facilities respectively in teaching the subject

To the statement "whether social studies teachers receive ICT training before joining the teaching profession" it was found that the majority (n=43; 59.7%) of the respondents agreed to the statement while 29 of them representing 40.3% indicated 'no' to the statement. Similarly, the respondents were asked whether they receive any ICT education training in their School, it was revealed that majority (n=39; 54.2%) of them agreed to the statement while 33 of them representing 45.8% indicated "no'' to the statement. These findings proved that most of the social studies teachers in the Sekondi-Takoradi have knowledge on ICT used in the teaching of the subjects. Some have used it before and were educated on it.

Analysis of the Main Data

Research Question 1: What are the available ICT facilities for teaching social studies in public Senior High Schools in Sekondi-Takoradi Metropolis?

The main purpose of the research question was to assess whether ICT facilities for teaching social studies were available. The data were analysed and discussed using mean and standard deviation. A mean score of 1.50 and above indicates ICT facilities were available and mean score of 1.49 and below shows ICT facilities were not available in the schools. The result is presented in Table 4

Table 4: Availability of ICT Facilities for Teaching Social Studies (n=72)

Statements	Available N (%)	Not Available N (%)	Mean	Std. Deviation
Computers	68 (88.9)	8 (11.1)	1.89	.316
Internet System	52 (72.2)	20 (27.8)	1.72	.451
Televisions and radios.	53 (73.6)	19 (26.4)	1.74	.444
Photocopier	49 (68.1)	23 (31.9)	1.68	.470
Educational Software	9 (12.5)	63 (87.5)	1.12	.333
Overhead projectors	44 (61.1)	28 (38.9)	1.61	.491
Printers	47 (65.3)	25 (34.7)	1.65	.479
Digital Video Recorder	34 (47.2)	38 (52.8)	1.47	.503
Telephone	36 (50)	36 (50)	1.50	.504
Digital cameras	27 (37.5)	45 (62.5)	1.37	.488
Total Mean/Std. Dev.			**15.75**	**3.975**
Mean of Means/Std. Dev.			**1.575**	**0.397**

Source: Field Data, May, 2015

Table 4 indicates the available ICT facilities in the public Senior High Schools in the Sekondi-Takoradi. With regard to Computer availability, it was found that majority 64(88.9%) of social studies teachers agreed to the statement. Most (n=52; 76%) social studies teachers indicated that internet system is available in the schools. Majority 53(73.6%) of the social studies teachers reported that they have television and radios in the schools. Regarding to photocopier as ICT facilities, most 49(68.1%) of the teachers agreed that it is available.

From Table 4, majority 63(87.5%) of the teachers revealed that educational software was not available in their schools. This was followed by digital video recorder where majority (n=38; 52.8%) of the teachers indicated

that it was not available. The majority 45(62.5%) of the teachers also revealed that digital cameras as ICT facility was not available in the schools.

From Table 4, it is seen that ICT facilities are available for teaching and learning social studies in the public senior high schools of Sekondi-Takoradi because the mean of means score (M=1.58; SD=0.40) indicates that majority of the teachers agreed that ICT facilities in the schools are available. The ICT facilities that are available in the schools were: computers, internet systems, televisions and radios, photocopier, overheads projectors, printers and telephone.

These results confirmed the study of Yunus (2007) who reports that ICT facilities available in schools include telecoms, TV and radio broadcasting, hardware and software, computer services and electronic media. These results also contradict the findings of Kenya School Net (2003) where almost 40% of schools had less than 10 computers, and were therefore inadequate for teaching and learning. This result is also in line to the study of Ayebi-Arthur, Aidoo and Wilson (2009) that showed that majority of the teachers in Senior High Schools in Cape Coast Metropolis had access to the internet and also 70% of the students had access to the internet.

Research Question 2: How are the available ICT facilities used in teaching social studies in public Senior High Schools in Sekondi-Takoradi Metropolis?

The purpose of the research question was to identify the use of the available ICT facilities in the Sekondi-Takoradi. The data was analysed and discussed using mean and standard deviation. A mean score of 2.50 and above indicates the use of ICT facilities and mean score of 2.49 and below shows ICT facilities are not used in the schools. The result is presented in Table 5

Table 5: Use of ICT Facilities in Teaching Social Studies (n=72)

Statements	Mean	Std. Deviation
Practical demonstration	3.01	0.623
Teaching learning materials (TLMs)	3.06	0.711
Drill and Practice	2.49	1.610
Finding information	2.92	0.685
To keep records of students' Scores.	2.68	1.702
To prepare and deliver lessons.	3.85	0.277
Communicating with other teachers	3.01	0.699
Making presentation	3.01	0.674
I use ICT resources to store vital data or information	3.06	0.743
Total Mean/Std. Dev.	**24.08**	**7.724**
Mean of Means/Std. Dev.	**2.68**	**0.86**

Source: Field Data, May, 2015

As evident in Table 5, it was found that majority (M=3.01; SD=0.62) of the social studies teachers strongly agreed that they use ICT facilities for practical presentation. Majority of the teachers also strongly agreed (M=3.06; SD=0.71) that they used ICT facilities as teaching and learning material (TLM). It was found that ICT facilities are being used by the teachers for finding information (M=2.92; SD=0.69) to facilitate the instructional process. Most of the teachers were found to be in agreement (M=2.68; SD=1.70) with the statement that they use ICT facilities for keeping records of students' scores.

From Table 5, it was found that most of the teachers agreed (M=3.85; SD=0.28) to the statement that they use ICT facilities to prepare and deliver lessons. To the statement "ICT facilities are used for communicating with

other teachers to improve instruction", it was found that most of the teachers agreed (M=3.01; SD=0.70) to the statement. Majority of the teachers strongly agreed (M=3.06; SD=0.74) to the statement that they use ICT facilities to store vital data or information.

From Table 5, it can be observed that majority of the social studies teachers in the Sekondi-Takoradi public Senior High Schools use ICT facilities in teaching the subject because the mean of means score of (M=2.68; SD=0.86). The standard deviation score indicates that most of the teachers' response concerning the items was similar and clustery around the mean score. The result, therefore, shows that teachers in Sekondi-Takoradi Metropolis use ICT facilities to for practical presentation, find information, prepare and deliver lessons, store vital data or information and as well as teaching and learning materials (TLMs).

These findings were in support to the study of Haddad and Drexler (2002), who identified that ICT facilities can be used in at least five different ways in education: Presentation, demonstration, drill and practice, interaction, and collaboration. Also, Becker, Ravitz and Wong (1999) supported that teachers use ICT facilities to write lesson plans, prepare materials for teaching, record and calculate student grades, and communicate with other teachers. As such, computers have become a routine tool for helping teachers accomplish their professional work.

Research Question 3: What is the perception of teachers towards the use of ICT facilities in the teaching of social studies in public Senior High Schools in Sekondi- Takoradi Metropolis?

The purpose of the research question was to identify the perception of the social studies teachers towards the use ICT facilities in the teaching of social studies. The data were analysed and discussed using mean and standard deviation. A mean score of 2.50 and above indicates positive perception of teachers towards the use of ICT facilities and mean score of 2.49 and below shows negative perception of teachers towards the use of ICT facilities in the schools. The result is presented in Table 6

Table 6: Teachers' Perception Towards the Use of ICT Facilities in the Teaching of Social Studies (n=72)

Statements	Means	Std. deviation
Makes lessons more interesting	2.87	0.736
Makes lessons more diverse.	2.71	1.081
Improve the presentation of materials for lessons	2.62	0.834
Motivate student in their learning	2.47	1.109
Gives me more confidence	2.86	0.904
Enables me to save time	2.69	1.709
Increase productivity in preparing and updating daily lessons	2.65	0.847
Makes me to meet the different needs of my student.	2.97	1.792
Makes student attentive in the teaching learning process.	3.15	0.166
Total Mean/Std. Dev.	**24.99**	**7.47**
Mean of Means/Std. Dev.	**2.78**	**0.83**

Source: Field Data, May, 2015

As shown in Table 6, it was found that most of the teachers agreed (M=2.87; SD=0.74) that ICT facilities makes social studies lesson more interesting. To the statement "ICT facilities makes lessons more diverse" it was found that majority of the teachers agreed (M=2.71; SD=1.08) to the statement. Similarly, it was found that majority of the teachers agreed (M=2.62; SD=0.83) that ICT facilities improve the presentation of material for lessons.

From Table 6, it was observed that most of the teachers agreed (M=2.65; SD=0.85) that ICT facilities increase productivity in preparing and updating daily lessons in social studies. Also, it was found that most of the teachers were in agreement (M=2.97; SD=1.79) with the statement that ICT facilities makes them to meet the different needs of their students. To the statement "ICT facilities makes student attentive in the teaching learning process" it was found that most of the teachers strongly agreed (M=3.15; SD=0.17) to the statement.

From Table 6, it can be seen that majority of the social studies teachers have positive perception towards the use of ICT facilities in the teaching of social studies because the mean of means score of (M=2.78; SD=0.83) indicate that a cluster of teachers agreed to the statement while the standard deviation revealed that most of the teacher were having conscientious response to the items. The results indicated that teachers in the Sekondi-Takoradi Metropolis perception about ICT facilities are that it makes student attentive in the teaching learning process, meet the different needs of their students, makes teachers more confidence, makes lessons more interesting and makes lesson more diverse.

These findings are in line with the view of Perrotta (2013) that the perceived benefits of using technology included aspects such as the access that it gives to wider learning content and resources, and the fact that it allows students to become more motivated, more active and independent, and more attentive in their learning process. Again, these results were congruent to the view of Slouti and Barton (2007) who indicated that ICT can motivate students in their learning by bringing variety into the lessons and at the same time sustaining teachers own interest in teaching. Balanskat et al (2006) are of the view that ICT use enabled teachers to save time and to increase productivity in such activities as preparing and updating daily lessons and maintaining records.

This current study also affirmed the findings of Lai and Pratt (2004) who concluded that teachers considered ICT to be beneficial to their teaching but not in the area of methods of delivery and classroom practice. Significantly, the most obvious effect identified by the teachers was not a change of philosophy or pedagogy but improved efficiency in the administration and management of teaching, including lesson preparation and presentation.

Research Question 4: What impact does teachers' factors has on the use of ICT in the teaching of social studies in public Senior High Schools in Sekondi-Takoradi Metropolis?

The purpose of the research question was to identify the perception of the social studies teachers towards the use ICT facilities in the teaching of social studies. The data was analysed and discussed using mean and standard deviation. A mean score of 2.50 and above indicates a positive influence of

teacher factor on the use of ICT facilities and mean score of 2.49 and below shows that teacher factor do not influence the use of ICT facilities teaching of social studies in the schools. The result was presented in Table 7

Table 7: Teacher-Factors that influences the use of ICT Facilities in Teaching Social Studies

Statement	Means	Std. deviation
Adequate training on the use of ICT facilities	3.18	1.706
Ownership of personal computer	3.37	0.796
Easy access to ICT facilities (projectors, computers and internet)	3.18	1.722
Effective timetabling of ICT rooms	3.01	1.850
Confidence in using ICT facilities	3.35	0.762
Willingness to use ICT facilities	3.97	0.360
Assistance and advice from colleagues when needed	3.61	0.632
Competence in the use of ICT facilities	3.57	0.608
Support from the whole school on the use of ICT facilities	3.40	0.725
Total Mean/Std. Dev.	**30.64**	**9.17**
Mean of Means/Std. Dev.	**3.404**	**1.02**

Source: Field Data, May, 2015

Table 7 shows teacher related factors that influence the use of ICT facilities in the teaching of social studies in the Sekondi-Takoradi. It was found that majority (M=3.18; SD=1.71) of the teachers strongly agreed that adequate training on the use of ICT facilities influence it use in the teaching of social studies. With regard to the statement "Ownership of personal computer"

it was observed that most (M=3.37; SD=0.80) of the teachers strongly agreed that personal computer influence them to use ICT facilities in their instructional process.

Concerning the statement "effective timetabling of ICT rooms", it was realised that majority of the teachers were in agreement (M=3.01; SD=1.85) with the statement. Similarly, it was found that most (M=3.35; SD=0.76) of the teachers strongly agreed that teachers' confidence in the use of ICT influence its application in the teaching of social studies. It was found that majority of the teachers strongly agreed (M=3.57; SD=0.61) that their competence in the use of ICT facilities influence them to use it in the teaching of social studies. Similarly, it was found that most of the teachers strongly agreed (M=3.40; SD=0.3) that support from the whole school influence them to use ICT facilities in the teaching of social studies.

From Table 7, it can be seen that teachers related factors have significant influence on the use of ICT facilities in the teaching of social studies because the mean score of (M=3.40; SD=1.02) indicates that they strongly agreed to the items but they varied in their responses. The findings, therefore, indicated that teacher-factors that influence the use of ICT facilities are willingness, assistance and advice from colleagues when needed, competence in the use of ICT facilities, ownership of personal computer and support from the whole school on the use of ICT facilities.

This finding is in support of the views of Cox et al. (1999); ChanLin, Hong, Chang and Chu (2006) and Mumtaz (2000) that teachers' confidence in using ICT, experience, willingness, motivation, and the perceived usefulness of ICT in teaching and learning are some other important facilitators for the

use of technology in education. According to Drent and Meelissen (2008), having strong ICT competence is an important factor in innovatively using ICT in teaching, although not more important than other factors.

These results also were in line to the finding of Veen (1993) who reported that the level of teachers' pedagogical skills, that is to say, whether teachers are able to integrate ICT appropriately and know exactly how they will teach with ICT, is another major enabling factor. Furthermore, Forgasz (2006) and Scrimshaw (2004) buttress the analysis that it is important to be able to easily access the technology rooms and equipment available. Since, if teachers have the opportunity to access these tools and rooms at any time, they would be more eager to integrate them into their teaching.

Research Question 5: What are the challenges social studies teachers face in the use of ICT facilities in teaching social studies in public Senior High Schools in Sekondi-Takoradi Metropolis?

The purpose of the research question was to identify the perception of the social studies teachers towards the use ICT facilities in the teaching of social studies. The data was analysed and discussed using mean and standard deviation. A mean score of 2.50 and above indicates challenges faced by teachers in the use of ICT facilities and mean score of 2.49 and below shows that teacher do not face challenges in the use of ICT facilities in teaching social studies. The result was presented in Table 8.

Table 8: Challenges Social Studies Teachers face on the Use of ICT Facilities

Statements	Means	Std. Deviation
Lack of knowledge about ICT facilities	3.69	1.370
Limited time in using ICT facilities	3.39	0.658
Fear	2.44	1.775
My age	2.35	1.646
Lack of confidence	2.85	0.659
Insufficient ICT facilities	3.22	1.762
No technical support when using the ICT facilities	2.89	0.827
Little experience on the use of ICT facilities	2.97	1.720
Support from the whole on the use of ICT facilities	3.21	0.583
Lack of training	3.51	0.653
Total Mean/Std. Dev.	**30.52**	**11.633**
Mean of Means/Std. Dev.	**3.052**	**1.163**

Source: Field Data, May, 2015

Table 8 indicates the challenges social studies teachers face in the use of ICT facilities in teaching the subject. It was found that majority of the teachers strongly agreed (M=3.69; SD=1.37) lack of knowledge about ICT facilities pose a challenge in its use in the process. It was realised that most of the teachers strongly agreed (M=3.39; SD=0.66) limited time in the use of the ICT facilities is a challenge.

From Table 8, it was observed that most of the teachers were in agreement (M=2.85; SD=0.66) with the statement that lack of confidence is a

challenge faced by teachers in the use of ICT facilities in teaching social studies. It was found that most (M=3.22; SD=1.76) of the teachers agreed that insufficient ICT facilities, no technical support when using the ICT facilities (M=2.89; SD=0.83), little experience on the use of ICT facilities (M=2.29; SD=1.72), support from the whole on the use of ICT facilities (M=3.21; SD=0.58) and lack of training (M=3.51; SD=0.65) were challenges faced by teachers in the use of ICT facilities in the teaching of social studies.

From Table 8, it can be seen that majority of the social studies teachers face challenges in the use of ICT facilities in the teaching of the subject because the mean of means score of (M=3.05; SD=1.16) revealed that the teachers face challenge in the use of ICT facilities. The mean score summarize the average responses of the teachers to the items while the mean of the standard deviation indicates that the teachers varied in their response to the items.

The results therefore showed that majority of the teachers in public Senior High Schools in the Sekondi-Takoradi Metropolis agreed that lack of knowledge about ICT facilities, lack of confidence, insufficient ICT facilities, no technical support when using the ICT facilities, little experience on the use of ICT facilities, support from the whole on the use of ICT facilities and lack of training were the majority challenges they face. On the other hand, some of the teachers were of the opinions that fear and age was not a major challenge.

These findings confirmed the study of Organization for Economic Cooperation Development (OECD) in 2009 that there are a number of barriers or challenges that inhibit the use of ICT in education. These barriers include an inconsistent number of computers to students, a deficit in maintenance and

technical assistance and finally, a lack of computer skills and/or knowledge among teachers. Also, the result was in line with Jenson et al. (2002) who classified these barriers as: limited equipment, inadequate skills, minimal support, time constraints and lack of interest or knowledge by teachers.

Again, the result support the study conducted by British Educational Communications and Technology Agency (BECTA) in 2004. They stated that a number of other important barriers for the use of ICT facilities were: lack of confidence, accessibility, lack of time, fear of change, poor appreciation of the benefits of ICT and age. Ertmer (1999) concurs with Schoepp (2005), asserting that if teachers are aware of and understand such barriers, they can initiate strategies to overcome them.

Research Hypothesis

Ho: There is no significant difference in male and female teachers' perception of the use of ICT in the teaching of social studies in the Senior High Schools of Sekondi -Takoradi Metropolis.

The purpose of the research hypothesis was to explore whether there is any significant difference in the perception of male and female social studies teachers towards the use of ICT facilities in the teaching of social studies. The data were analysed and discussed using independent sample t-test at the significant level of 0.05. Preliminary assumption was tested to check bivariate independent variable, continuous dependent variable and dependent variable has a normal distribution with the same variance in each groups. The result was presented in Table 9.

Table 9: Male and Female Perception towards ICT Facilities use.

Gender	M	SD	T	df	Sig. (2-tailed)
Male	20.52	8.49	.276	70	0.783
Female	19.93	9.45			

Source: Field Data, May, 2015

The Levene's test indicated that the difference for the male and female teachers was statistical insignificant ($p > 0.05$) and hence, this study was undergirded by equal variances not assumed. The results in Table 9 indicated that there was no significant difference in mean scores for male teachers ($M=20.52$; $SD =8.49$) and female teachers ($M = 19.93$; $SD = 9.54$), $t (70) = .269$, $p = 0.783$, (two tailed). Therefore, it is seen that male and female teachers did not differ in their perception towards the use of ICT facilities in the teaching of social studies in Sekondi-Takoradi; therefore, the null hypothesis is hereby retained.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This last chapter provides the summary, conclusion and the recommendation of the study. The summary is divided into aspect. The first aspect is the summary of the research process and the second part dealt with the summary of the key findings

Overview of the Study

The research design adopted for this study was descriptive research design. The descriptive survey was an attempt to collect data from members of a population in order to determine the current status of that population with respect to one or more variables. The population for the study was all social studies teachers in Sekondi-Takoradi Public Senior High Schools. The sample for the study was 100 social studies teachers. The census technique was used for 100 social studies teachers. The research instrument used was a questionnaire. The questionnaire was used to elicit information from social studies teachers in the selected Senior High Schools. The questionnaire was pre-tested in two Senior High schools in the Shama District. The reliability of the instrument was determined using Cronbach Alpha co-efficient. The data was analyzed with descriptive statistics (Mean, standard deviation, frequencies and percentages) and inferential statistics (independent sample t-test).

Key Findings

1. From the study, it was found that ICT facilities are available for teaching and learning social studies in the public senior high schools of Sekondi-Takoradi. The mean of means score indicate that majority of the teachers agreed that ICT facilities in the schools are available.
2. The study revealed that social studies teachers in the Sekondi-Takoradi public senior high schools use ICT facilities in teaching the subject.
3. It was found that social studies teachers have positive perception towards the use of ICT facilities in the teaching of social studies because the mean of means score indicate that they all agreed to the statement while the standard deviation revealed that most of the teachers were having conscientious response to the items.
4. The study reported that teacher-factors have significant influence on the use of ICT in the teaching of social studies.
5. The study found that social studies teachers face challenges in the use of ICT facilities in the teaching of the subject. Some of the challenges were: lack of knowledge about ICT facilities, limited time in the use of the ICT facilities, lack of confidence, insufficient ICT facilities, no technical support, little experience on the use of ICT facilities, lack of support from the school on the use of ICT facilities and lack of training.
6. The independent sample t-test results showed there was no significant difference in scores for male and female teachers' perception on the use of ICT facilities. The null hypothesis is hereby retained.

Conclusions

From the findings there was a strong indication that ICT facilities in general are available for teaching and learning social studies in the public senior high schools in Sekondi-Takoradi Metropolis. However, the quantities of these facilities were inadequate in relation to student population.

The findings again have revealed that apart from ICT facilities being available, teachers made use of them. It can, therefore, be concluded that ICT facilities are used in the senior high schools in the Sekondi-Takoradi Metropolis to enhance effective classroom teaching and learning of social studies. However, as seen from the definition of ICT, it does not only involve the use of computers but other equipment such as telephone, printers, photocopiers, television and many more. Teachers, therefore, used these facilities in the teaching and learning process of social studies to enhance students' understanding.

On the perceptions of the teachers with regards to the integration of ICT facilities into the learning and teaching process, it can be concluded that all teachers are of the opinion that the use of ICT facilities is relevant for the teaching and learning of social studies. Irrespective of their age and gender, teachers' beliefs about the positive effects and benefits of ICT facilities on their instruction and their students' performance motivate them to adopt and integrate ICT in their teaching.

Another conclusion is the positive relationship between teacher-factors and the use of ICT facilities. Internal factors (confidence, competence and willingness of the teacher) are more influential in enabling teachers' ICT facilities adoption and implementation in social studies lessons. In addition,

their personal interests contribute to motivating them to use more ICT facilities in class. Among various factors that influence the teachers' decision to utilize ICT facilities in their classrooms, creating a friendly and innovative school culture is crucial in addition to the availability of ICT facilities.

The findings revealed that factors such as lack of training, limited timetable, no technical and school support among others hinder the integration of ICT facilities into the teaching and learning process in the senior high schools in Sekondi-Takoradi Metropolis. However, it is worthy to note that in spite of all these challenges, teachers have positive attitudes towards the use of ICT. Therefore, it can be concluded that given the necessary support network and follow-up support, teachers in the senior high schools may improve their use of ICT to enhance the teaching and learning process.

Recommendations

1. Based on the findings it is incumbent on heads of the various schools to encourage the teachers in their schools to make appropriate use of ICT facilities in their teaching and learning process.
2. With the numerous benefits of the use of ICT facilities to both teachers and students, it is recommended that teachers continue to use ICT facilities during instructional periods.
3. By requiring integration of ICT in teaching and learning, schools will need to acquire, maintain and sustain their ICT facilities. The Ministry of Education should make budgetary allocations annually to maintain, replace, and expand ICT facilities in the schools.
4. Follow-up support should be provided by the Ghana Education

Service in the schools. This must include in-service education and training on the use of ICT for the teachers in the school and discussion of the implications of the use of ICT in teaching and learning.

5. Barriers that have and are still hindering the integration of ICT in the curriculum should be tackled by policy implementers. In this regard, as teachers who are unwilling to change from the traditional methods of teaching to using information and communication technologies, they should be encouraged by policy makers and sensitized from time to time to understand the good side of technology.

Suggestions for Further Research

1. A similar study need to be done in other districts in the region or other regions of Ghana for a more generalized conclusion to be made on the use of ICT facilities by teachers to enhance the teaching and learning of social studies in senior high schools.
2. A study need to be conducted in the private senior high schools and also in colleges of education.

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APPENDICES

APPENDIX A

UNIVERSITY OF CAPE COAST

COLLEGE OF EDUCATION STUDIES

Department of Arts & Social Sciences Education

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OUR REF: DASSE/ED/CSP/13/0006
YOUR REF:

Date: 7th April, 2015

TO WHOM IT MAY CONCERN

LETTER OF INTRODUCTION

The bearer of this letter **Mr. Magnus Acquah-Doughan** is a graduate student of the Department of Arts and Social Sciences Education of the University of Cape Coast, Ghana.

He requires some information from your institution for the purpose of writing a thesis as a requirement for the pursuit of M. Phil Degree Programme. His topic is **"The availability and untilisation of ICT facilities in teaching Social Studies in Public Senior High School in Sekondi – Takoradi Metropolis.**

I would be grateful if you would kindly allow him to collect the information from your institution. Kindly give the necessary assistance that Mr. Magnus Acquah-Doughan requires from you.

I will appreciate any help that you may be able to give.

DR. KOFI TSIVANYO YIBOE
HEAD OF DEPARTMENT

DEPARTMENT OF ARTS AND
SOCIAL SCIENCES EDUCATION
UNIVERSITY OF CAPE CO.
CAPE COAST, GHANA

APPENDIX B

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
DEPARTMENT OF ARTS AND SOCIAL SCIENCES EDUCATION

QUESTIONNAIRE FOR TEACHERS

TOPIC: *Availability and Utilisation of ICT Facilities in Teaching Social Studies in Public SHS in Sekondi –Takoradi Metropolis.*

.3Dear respondents

The researcher is conducting a research on the above topic. I would like you to participate in the study. The information gathered is for academic purposes only and would be treated with the strictest confidentiality. Please read through the items as carefully as possible and offer your candid opinion.

Instruction: Please tick (√) where applicable. Thank you for your cooperation.

SECTION A
Socio-Demographic Profile of the Respondents

1. What is your Sex? a) Male [ ]
   b) Female [ ]

2. What is your Age (in years)
   a) 20 - 29 [ ]
   b) 30 - 39 [ ]
   c) 40 – 49 [ ]
   d) 50+ [ ]

3. Marital Status
   a) Single [ ]
   b) Married [ ]
   c) Widow [ ]

   Other (Specify)

4. Highest Academic Qualification
   a) Diploma/HND [ ]
   b) B.ED degree [ ]
   c) B.A degree [ ]
   d) M.Phil. / M.A / M.ED [ ]
   Other (Specify) ……

5. Teaching Experience in Social Studies
   a) 1 – 5 [ ]
   b) 6 – 10 [ ]
   c) 11 – 15 [ ]
   d) 16 -20 [ ]
   e) 21+ [ ]

6. Have you being using ICT facilities in your teaching?
   a) Never use [ ]
   b) Rarely use [ ]
   c) Sometimes use [ ]
   d) Often use [ ]
   e) Very often use [ ]

7. Did you receive ICT training before joining the teaching profession?
   a) Yes [ ]
   b) No [ ]

   If No, how do you use ICT?

   ……...

8. Did you receive any ICT education and Training in your School?
   a) Yes [ ]
   b) No [ ]

SECTION B

The Availability of ICT Facilities in Teaching Social Studies

Please indicate by ticking (√) the availability of the following ICT facilities in teaching social studies. Indicate your response by ticking the appropriate column making use of the following key: 1 - Available

2 - Not Available

ICT Facilities	Available 1	Not Available 2
9. Computers		
10. Internet system		
11. Televisions and radios.		
12. Photocopier		
13. Educational Software for teaching social studies.		
14. Overhead projectors		

15. Printers		
16. Digital Video Recorder		
17. Telephone		
18. Digital cameras		

Others, please specify.....

SECTION C

The Use of ICT Facilities in Teaching Social Studies

Please indicate your reaction to each of the following statements by ticking (√) the number that represents your level of agreement or disagreement with it. Please make you sure to respond to every statement.

Level of Agreement or Disagreement– 5 point

1 – Strongly Disagree 3 – Neutral 5 – Strongly Agree
2 – Disagree 4 – Agree

Usage of ICT Facilities	**SD 1**	**D 2**	**N 0**	**A 4**	**SA 5**
19. Practical demonstration					
20. Teaching learning materials (TLMs)					
21. Drill and Practice					
22. Finding information					
23. To keep records of students' Scores.					
24. Communicating with other teachers					
25. Making presentation					
26. I use ICT resources to store vital data or information.					

Other (please specify) .....

SECTION D

Teachers' Perception towards the Use of ICT Facilities in the Teaching of Social Studies

Please indicate your reaction to each of the following statements by ticking (√) the number that represents your level of agreement or disagreement with it. Make sure to respond to every statement

Level of Agreement or Disagreement– 5 point

1 – Strongly Disagree 3 – Neutral 5 – Strongly Agree
2 – Disagree 4 – Agree

ICT facilities	SD 1	D 2	N 0	A 4	SA 5
27. makes lessons more interesting					
28. makes lessons more diverse.					
29. improve the presentation of materials for lessons					
30. motivate student in their learning					
31. gives me more confidence					
32. enables me to save time					
33. increase productivity in preparing and updating daily lessons					
34. makes me to meet the different needs of my student					
35. makes student attentive in the teaching learning process.					

Others, please specify.....

SECTION E

Teacher-Factors that Influences the use of ICT Facilities in Teaching Social Studies

Please indicate your reaction to each of the following statements by ticking (√) the number that represents your level of agreement or disagreement with it. Make sure to respond to every statement

Level of Agreement or Disagreement– 5 point

1 – Strongly Disagree 3 – Neutral 5 – Strongly Agree
2 – Disagree 4 – Agree

Adoption of ICT facilities is influenced by	**SD 1**	**D 2**	**N 0**	**A 4**	**SA 5**
36. adequate training on the use of ICT facilities					
37. Ownership of personal computer					
38. easy access to ICT facilities (projectors, computers and internet)					
39. effective timetabling of ICT rooms					
40. confidence in using ICT facilities					
41. willingness to use ICT facilities					
42. assistance and advice from colleagues when needed					
43. competence in the use of ICT facilities					
44. support from the whole school on the use of ICT facilities					

Others, please specify.....

SECTION F

Challenges Social Studies Teachers' face on the Use of ICT Facilities

Please indicate your reaction to each of the following statements by ticking (√) the number that represents your level of agreement or disagreement with it. Make sure to respond to every statement **Level of Agreement or Disagreement– 5 point** 1 – Strongly Disagree 3 – Neutral 5 – Strongly Agree 2 – Disagree 4 – Agree					
Challenges of using ICT Facilities	**SD 1**	**D 2**	**N 0**	**A 4**	**SA 5**
45. Lack of knowledge about ICT facilities					
46. Limited time in using ICT facilities					
47. Fear					
48. My age					
49. Lack of confidence					
50. Insufficient ICT facilities					
51. No technical support when using the ICT facilities					
52. Little experience on the use of ICT facilities					
53. Support from the whole on the use of ICT facilities					
54. Lack of training					

Thank you for your time and cooperation