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PERCEPTION OF SOCIAL STUDIES TUTORS ON THE INTEGRATION OF INFORMATION AND COMMUNICATION TECHNOLOGY IN TEACHING AND LEARNING SOCIAL STUDIES IN PUBLIC COLLEGES OF EDUCATION IN GHANA

ELIZABETH ADOMA SEFAH

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A THESIS IN THE DEPARTMENT OF BASIC EDUCATION, FACULTY OF EDUCATIONAL STUDIES, SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES, UNIVERSITY OF EDUCATION, WINNEBA, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF PHILOSOPHY (BASIC EDUCATION) DEGREE

DECEMBER, 2018

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DECLARATION

Students' Declaration

I, Elizabeth Adoma Sefah, declare that this dissertation, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Signature: …….

Date: ……

Supervisors' Declaration

We hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Thesis as laid down by the University of Education, Winneba.

Principal Supervisor: Professor Augustine Yao Quashigah

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Date: ……

Co-Supervisor: Mr. Kweku Esia-Donkoh

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Date……

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I am grateful to all authors whose works I consulted while writing my thesis. I am however solely responsible for any shortcomings in this thesis.

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DEDICATION

To my dear daughter, Ivy Ofori, for her love and support throughout this journey

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ABSTRACT

The purpose of the study was to investigate the perception of Social Studies tutors in the public Colleges of Education in Ghana towards the integration of ICT in teaching and learning Social Studies. A descriptive survey design was used to conduct the study. Stratified sampling technique was used to select 130 Social Studies tutors from public Colleges of Education in Ghana for the study. However, a response rate of 92% was achieved in this study because out of a total of one hundred and thirty (130) questionnaires distributed, one hundred and twenty (120) questionnaires were retrieved and used for the analyses. The questionnaire was used to collect data for the study which were analyzed using both descriptive statistics like mean, frequency, and standard deviation as well as inferential statistics such as t-test and ANOVA with the aid of SPSS version 20. The study found that Social Studies tutors had access to their personal computers most (M=3.67, SD=0.67), followed by desktop computers of the colleges (M=3.25, SD=0.52), laptop computers of the colleges (M=2.10, SD=1.17), availability of projectors (M=1.67, SD=0.95), accessibility to internet (M=1.35, SD=0.88) availability of IPAD (M=1.21, SD=0.74), and availability of Palmtop computers (M=1.01, SD=1.06). The findings indicated that respondents perceived that ICT helps to draw weaker students‟ attention to class (Mean =4.03, Std. Dev. =0.74), generates genuine interest in students (Mean = 4.45, Std. Dev.=5.24), makes it easier to prepare course materials (Mean =4.06, Std. Dev.=0.89), enhances teaching and learning without face-face interactions (Mean =3.95, Std. Dev.=0.92), and the relationship between theory and practice is strengthened (Mean =4.03, Std. Dev. =0.87). Additionally, the study revealed that challenges confronting the integration of ICT tools in the teaching and learning of Social Studies included insufficient ICT tools (mean =3.908, Std. Dev.=0.879), lack of pedagogical models on how to use ICT for teaching learning (Mean=3.767, Std. Dev.=0.914), and insufficient ICT during pre-service training (Mean =3.40, Std. Dev.=1.088). It was further revealed in the study that sex [t (118) = 31.04, $p<0.05$] and teaching experience [F (4, 115) =2.85, $p<0.05$] significantly influenced the Social Studies tutors‟ integration of ICT into the teaching and learning of Social Studies in the public Colleges of Education in Ghana. Therefore, it was recommended that the management of the public Colleges of Education in Ghana should liaise with the Ministry of Education, the National Council for Tertiary Education, parents, religious bodies, old students, and philanthropists to provide adequate ICT facilities like computers and projectors to ensure access to ICT tools by the Social Studies tutors in the public Colleges of Education in Ghana. It was also recommended that the management of the public Colleges of Education in Ghana should provide sufficient in-service training on ICT use in teaching and learning Social Studies so as to equip the tutors to effectively integrate ICT into the teaching and learning of the subject.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The recent advances in technology coupled with the rapidly changing nature of Information and Communication Technologies (ICTs) have given rise to the idea that the integration of technology in education is a major strategy of transforming the quality of education. In fact, it has been noted that technological advancement over the years has resulted in significant global changes in human matters. Information and Communication Technology (ICT) has become an indispensable factor in creating wealth worldwide (Opoku, 2004) and as a result has been integrated into practically every arena of life, involving commerce, education, governance, civic activities among others, in developed countries. Indeed, the agricultural sector, the health sector, the manufacturing sector, and security agencies. have all witnessed progress rapidly brought about by technology. Certainly, the world has reached the phase where any individual without basic computer knowledge will find it virtually impossible to function appropriately in society (Amedzo, 2007). Dunmire (2010) also observed that the mere mention of technology normally communicates the idea of advancement, improvement, and progress, while the lack of technology causes feelings towards a practice as archaic, ineffective and awkward.

Lately, extensive interest in computer-related Information Communication Technologies (ICTs) has been made by numerous nations with a conviction that it will strengthen and modify teaching and learning in the educational systems. Countries all over the world have also been encouraged to involve technology in innovative ways to enhance the learning experience across the curriculum. Again, significant attempts have been made to ensure that learners are opened up to technologies, with the hope

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that such integration will help them (learners) gain requisite skills to join the workforce, and to fully contribute their quotas to this technologically-driven world. In this context, literature (Watson, 2001; Mutula & Van Brakel, 2007; United Nations Educational, Scientific and Cultural Organization (UNESCO), 2008) has stressed that the involvement of new technologies in curriculum delivery has both direct and indirect influence on the teaching and learning process and on social and economic development. It is also contended by Watson (2001) that the usage of the technologies in the classroom profits the learners because it helps them to learn the technological skill with actual tasks. The main presupposition therefore is that, these technologies are agents for change in the teaching and learning methodologies, and in access to information.

Despite the significant impact of ICTs on every aspect of human life, it has been noted that progress in application of technology in the field of education has been slow (Afari-Kumah & Tanye, 2009). Vrasidas, Panaou, Antonaki, Aravi, Avraamidou and Theodoridou (2010) further indicated that while in rich industrialized nations like the United States, technology is abundant in schools and classrooms, the situation regarding technology in schools is worrisome in developing countries. The indication is that Africa, which is a developing region, appears to be making lesser progress towards using technology as a means of instruction.

Ghana, a developing country, also recognizes the relevance of Information and Communication Technology to her socio-economic development. In Ghana, one area of concern regarding the use of technology is the educational sector. It is expected that the introduction of ICTs into the educational system would improve the teaching and learning process and also enhance both the teachers‟ and learners‟ abilities to use

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and apply technology in their world of work (Afari-Kumah & Tanye, 2009). It is also hoped that teachers‟ use of technology in education would improve educational outcomes and increase technological skills. In the light of this, the Ghana ICT for Accelerated Development (ICT4AD) policy was devised with an overall objective to "engineer an ICT-led socio-economic development process with the potential to transform Ghana into a middle income, information-rich, knowledge-based and technology driven economy and society" (Republic of Ghana, 2003, p. 8). Among its specific purposes, the ICT4AD strived to "promote an improved educational system within which ICTs are widely deployed to facilitate the delivery of educational services at all levels" (Republic of Ghana, 2003, p. 9).

In this direction, the then Minister of Education, in January 2009, stressed that the deployment of ICT into Education results in the creation of new possibilities for learners and teachers to engage in new ways of information acquisition and analysis. The Minister stressed on the Government‟s commitment to a comprehensive programme of rapid deployment and utilization of ICT within the Education Sector to transform the education system and thereby, improve the lives of people. The Minister‟s statement indicates that equitable deployment and effective utilization of ICT potentially would improve access and quality of education delivery to enhance learner achievement. It can further be said that the integration of ICT in the teaching and learning of a particular subject could help the students gain better achievement in that subject.

From the early 1990s, education stakeholders in Ghana have been concerned about how teachers and students use ICT in schools, and how their use supports learning (Boakye & Banini, 2008). Therefore, at the beginning of the millennium, education authorities in Ghana embarked on a number of projects to introduce ICT into Ghanaian education set up at the

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basic and secondary school levels due to the realization that Ghanaian professionals could not compete on the global market for jobs because they were limited in skill, especially in the area of Information Technology (Nyarko, 2007). However, the education sector seems to be lagging behind when it comes to integrating technology into teaching and learning. The situation in the second-cycle institutions is even disturbing as technological devices are largely unavailable or woefully inadequate (Afari-Kumah & Tanye, 2009).

Even though over the years, Ghana"s education policy makers have stimulated the use of ICT in the classroom through educational reforms and other policies, their attempts appear to have lost their substance partly because the commitment of government to the provision of infrastructure for ICT policy implementation has been minimal (Amenyedzi, Lartey & Dzomeku, 2011). A close look at the public Colleges of Education (CoE) in Ghana shows that apart from the introduction of ICT as a subject, most tutors do not deploy technology into their classroom instruction. As Field (2003) admits, most teachers feel it is a burden to make use of ICT in teaching. The implication is that teachers tend to teach without new technological innovations.

Nevertheless, the numerous subjects, particularly Social Studies, taught in the colleges require the incorporation of technology. Shane (2008) agrees with this opinion and explains that "unlike other subjects, such as Mathematics and Science, Social Studies provides a more static concentration of discourse without much variation in terms of content from one classroom or school to the next" (p. 101). He adds that even as the form of presentation may vary, there is a basic component to the subject, which remains comparatively consistent regardless of where it is taught and the person who teaches it. He thus suggests that Social Studies, as a subject, need to

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be brought to life to facilitate understanding and to foster the interest of students in the subject. To achieve this, he indicated that there is the need to use appropriate teaching methods as well as appropriate instructional resources to aid delivery.

There are numerous ways in which Social Studies tutors can help to integrate ICTs in the classroom in order to assist the development of the content and other key skills. For instance, power point presentations, web downloads of audio and video recordings, commercially produced Compact Disks (CDs) and Digital Video Disks (DVDs), animated graphics, mixing media and electronic communication can improve teaching and learning of Social Studies. Also, the use of coloured animated images to teach some concepts or topics perceived to be difficult can help students to grasp such concepts or topics promptly in an interesting and relaxed environment. As Leakey (2011) opined, integrating ICTs in teaching and learning of a language motivates both learners and teachers making the learning process more exciting and enjoyable; provides a wide range of multimedia sources enabling texts, offers opportunities for intensive one-to-one learning in a multimedia computer laboratory; and offers access to a rich resource of authentic materials on the internet, CD-ROM and DVD.

The benefits that ICT brings into teaching and learning involve creating new opportunities for effective knowledge assimilation by students, making education cheaper and easier, bringing about better learning outcomes, and introducing multiple teaching and learning opportunities (UNESCO, 2007). Indeed, computers and the related infrastructure, especially Internet, can be used to provide information that could enhance the efficiency and effectiveness of the teaching and learning process (Guha, 2003). Integration of ICTs in teaching and learning Social Studies can allow

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learners interact with the computer based resources rather than the instructor who is the teacher all the time. Through the computer resources, learners are able to interact and communicate with the teacher on the curriculum content and can even discuss assignments given to them and give immediate feedback. This is because ICTs enable students to engage in learning activities any time, in any place and use any method to learn at any pace (Guha, 2003). It can also be exemplified that a student finding it difficult to identify what the latest technology is or the latest developments about Social Studies, will have his or her problem reduced if he or she has an access to use a computer equipped with the services of the internet. This is because a world of rich and abundant knowledge will be placed before him or her at the click of an icon on a computer.

Social Studies is one of the subjects that are studied in Ghana at both pre-tertiary and tertiary levels. Scholars in the subject area attempt to offer their descriptions of Social Studies. According to Alazi (2009), Social Studies borrows concepts from sociology, political science, religion and humanities, and synchronize them together. It is therefore deduced from this definition that Social Studies is an interdisciplinary subject. On their part, Quashigah, Dake, Bekoe, Eshun and Bordoh (2014) posit that:

> Social Studies Education is "the integrated study of the social science and humanities to promote civic competence. The primary purpose of Social Studies Education is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally and ethnically diverse democratic society in an interdependent world (p.11).

The above definition from Quashigah et al. (2014) reiterates the earlier understanding that Social Studies is an amalgam of concepts in the social sciences. The perspective of this author suggests that the prime goal of Social Studies is to equip citizens with desirable values and behaviours so that they can participate in the democratic

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processes of their country, and live more productive and satisfying lives. Mezieobi and Mezieobi (2013) allude to this claim when they state that Social Studies inculcates in its clients societal socially approved and desirable value systems and attitudes. Accordingly, the effective teaching and learning of the subject has received attention in Ghana over the decades. For instance, Social Studies is a compulsory subject at the pre-tertiary level while it is an area of specialization at the tertiary level of education in Ghana.

However, the teaching and learning of Social Studies is confronted with challenges. For instance, Ukadike and Iyamu (2007) observed that Social Studies teachers largely adopt the lecture approach to teaching instead of the inquiry approach that stimulates learners‟ analytical skills and critical thinking ability in tackling social problems. Obuh (2007) also discovered that Social Studies teachers have not demonstrated high competence in the use of ICTs in the teaching of the subject. Even though the challenges identified above may be perceived as separate, they are related. For instance, the inability of Social Studies teachers to use ICTs in their teaching, thereby making the lessons practical and real, would lead to the excessive adoption of the lecture method of teaching. It is therefore worrying that Social Studies tutors in the public Colleges of Education in Ghana are not well versed in the application of ICTs in teaching Social Studies.

The foregoing discussions emphasize the importance of integration of ICT in the teaching and learning of Social Studies. It is therefore pertinent to appraise the status quo in this regard, identifying the perception of Social Studies tutors towards the integration of ICTs in their instruction in the public Colleges of Education. In Ghana, public Colleges of Education are mandated to train professional teachers for the basic

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education level. These teachers pursue a 3-year programme leading to the award of Diploma in Basic Education. However, in 2018/ 2019 academic year, public Colleges of Education are accredited to mount a 4-year Bachelor of Education Degree programme in Basic Education. The current study seeks to examine Social Studies tutors‟ perception towards the integration of ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana.

1.2 Statement of the Problem

The Government of Ghana over the years has taken measures to support and implement strategies aimed at enhancing students‟ participation and the quality of teaching and learning in schools through ICT integration. Conscious efforts aimed at promoting access to and quality of education through ICT at the global and continental levels have shaped Ghana‟s development policies in recent times. Most of these policies have sought to spell out the goals, aspirations and strategies of integrating ICT in education. In 2003, for instance, the Information and Communication Technology for Accelerated Development policy (ICT4AD) was devised. The policy seeks to use ICT to transform the Ghanaian economy into information and a knowledge-based one (Republic of Ghana, 2003).

Ghana‟s commitment to modernize and transform the delivery of education at all levels through the use of Information and Communication Technologies (ICTs) was also demonstrated through 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. It has, in addition, been noted that successive governments have all designed policies to ensure ICT integration in education. For instance, the current government has introduced the “Free Wifi Policy” at the various Senior High

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Schools which seeks to provide web-based information to the students (Adogla-Bessa, 2017). The focus of this is also to provide every school and community with ICT infrastructure to equip young people with the necessary skills for the country‟s development. The implication is that some steps have been taken to reform curricula and modernize teacher training to establish a computer supply programme that will equip students with modern ICT skills. Generally, the aim is to facilitate, mobilize and provide ICT infrastructure to all schools, community and other learning institutions in Ghana.

Even though attempts have been made to ensure ICT integration, it has been found that most of these programmes aimed at ensuring ICT integration in education in Ghana were disintegrated, unstructured and did not cover all the schools (Nyarko, 2007). Irrespective of the measures that have been put in place in Ghana to ensure integration of ICT in education, researchers such as Baek, Jong and Kim (2008) found that ICT usage in teaching and learning in the educational context was very low and even fell back behind the business sector.

It has also been noted that the integration of ICT in the teaching and learning of Social Studies is confronted with challenges in many countries in Africa, particularly in African public universities (Awidi, 2008). Likewise, in the Ghanaian schools, there is inadequate information on how ICTs could be diffused and used by teachers, thereby confirms findings of a study by Aduwa-Ogiegbaen and Iyamu (2005) that there are wide gaps in the use of ICTs between rural and urban schools in favour of urban schools. In many universities in Ghana, for instance, the ICT equipment that are needed to augment the effective delivery of lecture as well as effective learning present a very serious limitation (Edumadze & Owusu, 2013). This is to say that the

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ICT tools and resources such as laptops, speakers, projectors, and reliable internet connectivity are still not adequately available in most public Colleges of Education in Ghana.

Some lecturers and tutors in public Ghanaian Universities and public Colleges of Education have had little exposure to ICT resources such as computers until recently (Edumadze & Owusu, 2013). In addition, many students in Ghana spend the greatest part of their time in ICT laboratories for non-academic purposes (Boakye & Banini, 2008). Even with the increasing number of research on the adoption of ICT use in education in Ghana (Boakye & Banini, 2008; Agyemang, 2012; Sarfo & Anson-Gyimah, 2010; Asare, 2010), studies in the area of ICT use in the public Colleges of Education still remain under-researched in Ghana. Also, none of these studies has concentrated on teachers‟ perceptions towards using ICT in teaching and learning in Ghanaian public Colleges of Education. Investigating the perceptions of Social Studies tutors in the public Colleges of Education in Ghana towards integrating ICT in teaching and learning is exceptionally important because it will reveal the challenges students and tutors face in the use of ICT during instructional hours. It is therefore pertinent to investigate perceptions of Social Studies tutors towards the integration of ICT in teaching and learning in the Ghanaian public Colleges of Education. This assertion forms the rationale for the study.

1.3 Purpose of the Study

The purpose of the study was to investigate the perception of Social Studies tutors in the public Colleges of Education in Ghana towards the integration of ICT in teaching and learning Social Studies.

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1.4 Objectives of the Study

The objectives of the study were to:

1. investigate how the demographic background of College Tutors influences their knowledge on the integration of ICT in the teaching and learning of Social Studies in Ghana?
2. examine the perception of Social Studies tutors in the public Colleges of Education in Ghana on the importance of integrating ICT in teaching and learning Social Studies.
3. the challenges faced by Social Studies tutors in integrating ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana.
4. investigate the perception of Social Studies tutors on the measures that could be put in place to enhance the integration of ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana?

1.5 Research Questions

The research questions of the study were:

1. How does the demographic background of College Tutors influences their knowledge on the integration of ICT in the teaching and learning of Social Studies in Ghana?
2. What perception do Social Studies tutors in the public Colleges of Education in Ghana have on the importance of integrating ICT in teaching and learning Social Studies?
3. What challenges are faced by Social Studies tutors in integrating ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana?

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4. What are the perceptions of Social Studies tutors on the measures that could be put in place to enhance the integration of ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana?

1.6 Hypotheses of the Study

The study sought to test the following null hypotheses:

H_{01}: There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different sex and their integration of ICT in teaching Social Studies.

H_{02}: There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different academic qualification and their integration of ICT in teaching Social Studies.

H_{03}: There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different age and their integration of ICT in teaching Social Studies.

H_{04}: There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different years of teaching experience and their integration of ICT in teaching Social Studies.

1.7 Significance of the Study

Theoretically, it is hoped that the findings of the study will help in obtaining contextual data to throw more light on Social Studies tutors‟ perception of integrating ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana. Practically, the findings of the study will be significant to stakeholders of education to determine how Social Studies tutors‟ perception on the integration of ICT could negatively or positively affect teaching and learning of Social Studies in

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the public Colleges of Education in Ghana. It is further anticipated that the results of the study will provide information to the curriculum developers to design Social Studies curriculum materials to ensure ICT integration in teaching and learning of the subject in the public Colleges of Education in Ghana.

The results will be useful to the management of the public Colleges of Education in Ghana in giving direction on how to effectively integrate ICTs in teaching and learning Social Studies. It is envisaged that results of the study will guide tutors in the public Colleges of Education in Ghana to intensify, modify and integrate ICT in their Social Studies instruction. That is, the study may highlight the need for Social Studies tutors in the public Colleges of Education in Ghana to modify their pedagogical approaches through the integration of ICTs in the teaching and learning of Social Studies. Finally, tutors and students will be provided with opportunities and capacity to increase the level of collaboration and participation at various levels of learning and teaching of Social Studies by using a variety of ICTs in the public Colleges of Education in Ghana. In the long run, this may impact on curriculum development and teacher training by offering refresher courses to the tutors to address the need to effectively respond to an ever-changing technological and digital landscape.

1.8 Delimitation of the Study

This study focused on the perception of Social Studies tutors in public Colleges of Education in Ghana on ICT integration in the teaching and learning of Social Studies. Therefore, private Colleges of Education were not involved in the study. The scope of the study was Social Studies tutors in the public Colleges of Education in Ghana. In essence, the study excluded tutors who teach other subjects (other than Social Studies) in the public Colleges of Education in Ghana.

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1.9 Limitations

The study was conducted in the public Colleges of Education in Ghana where the respondents were spread all over the country. Due to this, the researcher sought the help of research assistants in the data collection. Even though the research assistants were trained in the collection of data, the researcher could not be certain that there were no biases in the collection of data.

1. 10 Organization of the Study

This study consists of five chapters. The first chapter seeks to provide an introduction to the study. It comprises the background to the study, statement of the problem, purpose of the study, research questions hypotheses, significance of the study, delimitation of the study and organization of the study. Chapter two focuses on the literature review and conceptual framework. The third chapter discusses the research methodology that was employed. This embraces research design, target population, sample and sampling procedure, data collection methods, and data analysis techniques. Chapter four encompasses the data presentation, analysis and discussion. Finally, chapter five presents summary, conclusions, recommendations, implications and suggestions for further studies.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

In this chapter, literature related to integration of technology in teaching and learning has been reviewed. The following are the themes which have been drawn from the objectives of the study: integration of ICTs in teaching and learning processes, teachers‟ perceptions in integrating ICTs in teaching and learning process, teachers‟ proficiency in integrating ICTs in teaching and learning Social Studies, challenges of integrating ICTs in teaching and learning of Social Studies and other related studies on integration of ICTs in education.

2.1 Nature of Information and Communication Technology (ICT)

Finger, Russell, Jamieson-Proctor and Russell (2007) opined that the term ICT normally refers to computer-based and computer-related devices. They also added that it involves a variety of other devices that can be used for information and communication purposes. They exemplified that ICT includes a range of devices such as the internet, mobile phones, digital cameras, plasma screens, digital video recorders, interactive whiteboards, and wireless technologies and networking. Their view show that the nature of ICT has rapidly changed and grown beyond mere building it around the personal computer tools. In view of this, it can also be said that the rapid change in the nature of ICT has expanded the use of ICT tools.

Blurton (2002) further broadens the nature of ICT and explains that it is “diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information” (p.1). One can thus infer from the view of Blurton (2002) that one of the ways to understand the term is to consider how technologies aid

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people and institutions in their everyday functions and activities through appliances such as computers, robots, satellites, telephones, televisions, email, etc. That is, one good way to think about ICT is to reflect on all the uses of technologies that already exist to assist individuals, businesses and organisations use information.

The view of Blurton (2002) is in line with the view of Betrus, Branch, Doughty and Molenda (2008) who see ICT in a learning context as the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources. Information and communication technologies, thus cover the related technologies that can store, retrieve, manipulate, transmit or receive information electronically in a digital form. It is in this context that this current study tends to consider a wide range of new technologies rather than to simply concentrate on the personal computer.

Finger et al. (2007) also posited that the term ICT has in recent times become more extensively used globally to replace earlier terms such as "technology learning" and "information technology." They also added that in the United States instead of employing "ICT in education", educational technology is preferred to imply the integration of technology and curriculum to support learning; electronic information access and exchange; personal and professional productivity; technical assistance and leadership; and computer science education (Jamieson-Procter, Watson and Finger, 2003).

The view of Finger et al. (2007) is in line with the purpose of this study which seeks to examine the perception of Social Studies tutors in Colleges of Education on integration of ICT in teaching and learning. Thus, this study aims to examine perception of Social Studies tutors in the public Colleges of Education towards the

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inclusion of computer networks through the internet, and dedicated personal computers and associated equipment such as printers, video and audio software programs, digital cameras, and scanners, various ICT-enhanced laboratory equipment, and interactive whiteboards in classrooms and laboratories in teaching and learning.

2.2 Technology Integration in Education

In today‟s information age, information and communication technologies (ICTs) have become essential tools which are producing great impacts on the lives of people worldwide. In reality, it can be said that this effect is most significant in education. The computer has become an indispensable tool for teaching and learning in schools. Significantly, teachers can make use of the internet to improve teaching and learning, but this strategy needs to be well structured and sequenced (Pachler, 1999). Pachler (1999) further proposed that pupils have to be prepared well for using the internet and exemplified that they need to be clear about intended learning outcomes and need to have clearly defined tasks to work on. It can thus be deduced from the view of Pachler (1999) that if schools ensure the effectiveness of ICTs usage taking into consideration the existing classroom curricula and pedagogies, their students will fully be developed to meet the current technological demands. In this context, Finger et al. (2007) agrees with Pachler (1999) that ICT has changed the quality of education and it is obvious for many educators that students are also changing by using ICT tools. Betrus et al. (2008) also divided ICT integration into three levels: creating, using and managing.

In fact, the importance of ICT in enhancing the quality of and access to education has been appreciated at the international, national and regional levels. In the year 2000, for example, world leaders who participated in the United Nations‟ Millennium Summit embraced the Millennium Declaration out of which the Millennium

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Development Goals (MDGs) were derived (National Development Planning Commission (NDPC), 2012). Among the goals was the attempt to make basic education accessible to all boys and girls by 2015 as well as the effort to improve the quality of basic education in general of which the role of ICT was paramount. In the same year, the World Education Forum was organized in Dakar, Senegal. During this forum, the participants also embraced the Dakar Framework for Action in which countries were encouraged to create an environment to "enable all individuals to realize their rights to learn and to fulfill their responsibility to contribute to the development of their society" (UNESCO, 2000:15). Countries were also urged to utilize the benefits of information and communication technologies to improve access to education by remote and disadvantaged communities; improve data collection, strengthen capacity building of teachers; and make available opportunities to communicate effectively and efficiently across classrooms and cultures (UNESCO, 2000).

In 2003, 179 countries participated in the World Summit on Information Society (WSIS) in Geneva to discuss ways of making ICT accessible to everyone in the world. The WSIS sought to bridge the digital divide between and within countries and establish an all-inclusive information society (Berry, 2006). In order to put into action the plans drawn-up and adopted during the WSIS, a second phase of the WSIS was held in Tunis. With regard to education, the WSIS concentrated on the provision of internet connectivity to all Universities, Secondary and Primary schools. It also aimed at developing specific training programs in the use of ICT in order to deal with the educational needs of information professionals (Berry, 2006).

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Some initiatives in Africa also show that the continent shares with the rest of the world, the urgency to integrate ICTs into all sectors of her economy to smooth socio-economic development. In 1996, for instance, the African Information Society Initiative (AISI) was introduced to establish an information society in which all citizens, irrespective of age, gender, location and sector, would have access to knowledge through the use of computers and other communication media (Economic Commission Africa, 2008). In reality, the AISI was the first comprehensive strategy by African governments to move their countries into the Information Age (Economic Commission of Africa, 2008). Under the AISI, many ICT initiatives were carried out with assistance from international organizations.

The formation of the New Africa"s Partnership for Development (NEPAD) also demonstrated another move in the development of Information and Communication Technology on the African continent. This gave rise to the NEPAD e-School Initiative which was launched to introduce ICT in Primary and Secondary schools. The overall aim of the NEPAD e-School Initiative was to prepare and equip primary and secondary school students with ICT skills and knowledge to assist them participate fully in the information society. Also, the NEPAD e-School Initiative aimed towards building the capacity of teachers and students to facilitate the use of ICT infrastructure in the teaching and learning process. As part of the implementation of the NEPAD e-School Initiative, demonstration projects were carried out in a number of Primary and Secondary schools in twenty (20) countries including Ghana, Kenya, Senegal and Burkina Faso. After this phase of the NEPAD e-School Initiative, a conference was held in Ghana in March, 2012 to put forward a new Public Private Partnership (PPP) model to push forward its agenda of introducing ICTs in education.

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It has also been noted that efforts at advancing access to and quality of education through ICT at the global and continental levels have shaped Ghana‟s development policies over the years. At the beginning of the millennium, Ghana‟s education authorities earmarked a number of projects to introduce ICTs into the Ghanaian education set up; especially at the basic and secondary school levels. For example, in the middle of the 1990s, it was realized that Ghanaian professionals could not fully compete on the global market for jobs in that most of the graduates were limited in skill particularly in the area of information technology. Subsequently, the authorities integrated the study of ICT as part of the study of science. Accordingly, the government of Ghana with the Ohio University and in collaboration with Non-Governmental Organizations (NGOs), philanthropists and Parent-Teacher Associations (PTAs) established about 110 science resource centres to help the teaching of science and ICT. Unfortunately, it was noted that the various programmes were disintegrated, unstructured and did not cover all the schools (Nyarko, 2007).

In addition, in order to create the stimulating environment for the use of ICT in the area of education, the government of Ghana in 2000 with the help of the World Bank INFODEV project established a Wide Area Network called the Research and Educational Network (REN). Presently, it has been noted that the infrastructure is still functioning with the University of Ghana, hosting the main server and linking up other institutions such as University of Cape Coast, Kwame Nkrumah University of Science and Technology, University of Education Winneba, Center for Scientific and Industrial Research, Ghana Atomic Energy Commission and University for Development Studies (Government of Ghana, 2003).

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In 2003, the Information and Communication Technology for Accelerated Development policy (ICT4AD) was formulated. The policy sought to transform the Ghanaian economy into information and a knowledge-based one through to the use of ICT (Republic of Ghana, 2003). In order to facilitate a multi-sectoral application of ICT, the policy required all sectors of the Ghanaian economy to draw-up their own ICT policy frameworks that were expected to be consistent with the aims and aspirations of the national ICT policy. In view of this, the Ministry of Education further came out with the ICT in Education Policy framework document in 2008 to provide a clear purpose and basis for the effective integration of ICT into the education sector (Ministry of Education, 2009). The key goal of the ICT in Education policy was to ensure that graduates from Ghanaian educational institutions had the capacity to use ICT tools confidently and innovatively to develop the requisite skills needed to function effectively and fully in the global knowledge economy by 2015 (Ibid).The policy was grounded in the belief that there were some elements that strengthened the successful integration of ICT in education. Among the elements noted were teaching and learning, management and administration, communication and access to information. In addition, four other elements were found to be very important in planning ICT integration in education. These elements were equity, access to ICT infrastructure, capacity building and norms on the use of ICT infrastructure. The specific goals of the policy were to:

1. facilitate the deployment, utilization and exploitation of ICT within the educational system to improve on educational access and delivery to support teaching and learning from the primary level upwards.

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2. modernize the educational system to improve the quality of education and training at all levels of the educational system and expand access to education, training and research resources and facilities.
3. orient all levels of the country‟s educational system to the teaching and learning of science and technology in order to accelerate the acculturation of science and technology in society and produce a critical mass of requisite human resources and a well-informed citizenry.
4. achieve universal basic education and improve the level of basic and computer literacy in the country.
5. ensure a population in which 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 and in all aspects of the educational system, especially at the basic and secondary levels (ibid).

The Ministry of Education and its agencies were responsible for the implementation of the policy. It was added, however, that the Ministry could partner with other ministries, local and international organizations in implementing the policy. In line with the ICT in Education policy objectives, a number of initiatives were also pursued. Under the NEPAD e-School Initiative, for example, beneficiary schools were provided with computers, computer laboratories and internet connectivity. In 2004, Mr. Kwadwo Baah-Wiredu, the then Minister of Education, thus indicated that over 300 out of the 476 Senior Secondary Schools (SSS) in the country had one form of ICT facility while all the then 46 Teacher Training Colleges were being fastened onto the ICT (Acquah, 2004). Nonetheless, schools had to pay subscription fees for

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the internet connectivity. Unfortunately, the internet services were terminated because most of the schools were unable to afford the fees (Frempong, 2010).

Correspondingly, in recent times, the Ministry of Education in conjunction with the Ministry of Environment, Science and Technology, the Ministry of Communication, the GET Fund and RLG Communications Limited under the Better Ghana ICT Project were to provide schools in the country with free laptop computers. From the foregoing discussion, it has been noted that the government‟s commitment to transforming teaching and learning at all levels of education through the integration of ICT has been demonstrated by a number of initiatives including the adoption of the ICT in Education policy and other ICT in education initiatives over the past years.

Apart from these initiatives that have been put together to ensure ICT integration in teaching and learning, there have also been several calls on teachers to integrate technology into school curriculum by the media, professional development programs, teachers, parents and administrators. Probably, these calls may be based on the national reports and literature reviews (Rogers & Finlayson, 2003) that suggest that technology can help improve students‟ performance on tests and academic work, advance higher-order thinking skills, and boost students‟ motivation and self-concepts.

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2.3 ICT Adoption Theories

A number of studies have been used to expound many theories and models that concern the adoption and use of ICTs in our daily lives. It has been found that most of these theories and models also focused on individual‟s perception to adoption and use of ICT. Consistently, these theories maintained that there are three stages of ICT adoption and use. The three stages involve: pre-adoption, adoption and post-adoption stage. The pre-adoption stage provides the individual with the chance to examine a new technology and prepares him/her to use it. In the adoption stage, the individual is given the opportunity to form a perception of using the new technology and is also encouraged to consider it necessary to get hands on particular ICT resources to use. In the post-adoption stage, the individual is allowed to make a decision on whether he/she wants to continue using that particular technology or to abandon it altogether. Some of the various ICT adoption theories and models that exist and have guided the three stages include “Social Psychology Theories,” “Innovation Diffusion Theories” and “Constructivism Theory” which have been discussed below.

2.3.1 Social Psychology Theories

These theories have sought to describe the behaviour of an individual. The Social Psychology Theories (SPT) includes “Theory of Reasoned Action” (Fishbein & Ajzen, 1975) which describes the individual behaviour based on behavioural intention that influences one‟s behaviour or perception. This theory, combined with other models, has an important influence on the plan to use or adopt the intended technology. The second is the “Theory of Planned behaviour” (Ajzen, 1991) which highlights particular noticeable beliefs that determine behaviours, intentions and patterns. The third theory is the “Technology Acceptance Model” which centres primarily on the adoption and use of ICT in addition to its perceived usefulness and

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ease to use. Many scholars who have used the Social Psychology Theories confirm that there is a significant relationship between the intended behavior and use of the intended technology (Ajzen, 1991).

2.3.2 Innovation Diffusion Theory

This theory has also been employed in studying individual‟s technology adoption and use. "Innovation Diffusion Theory" consists of five elements that involve: innovation, time, communication, channels and social systems (Rogers, 2003). Rogers (2003) opined that an individual‟s technological behaviour and perception motivate him/her to decide to adopt and use a specific technology. Agarwal & Prasad (1997) have also used "Innovation Diffusion Theory" in their studies. In their study, they found out that there was significant relationship with other factors in ICT adoption.

2.3.3 Constructivism Theory

In this theory, it is assumed that through the facilitator who is the teacher, the learner uses the knowledge that he/she already has in getting new knowledge. This theory distinguishes knowledge as something that originates from the learner. Bruner (1990) therefore recommended that, through the sphere of consensus, the individual needs to get knowledge through one‟s experience. To him, the new knowledge may be established from that which one knows without changing its structure. This theory thus hypothesizes that learners grasp the meaning of something from new experiences they come across. Such experiences may emerge from the environment they find themselves and from their continual interaction with their peers. Bruner (1990) also explained that any situation of originality that emerges leads to changes.

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He further explains that the process of coming up with new knowledge on the basis of learner‟s experience is termed as invention or creativeness. He thus posits that the learning of environmental creativity needs learners to use their knowledge and experience to construct new findings which relate to their areas of learning. In this situation, the teacher is only seen as a facilitator and his/her main responsibility or task is to give direction to learners so that they can contribute and create their own comprehension of knowledge that eventually results in learning.

Also, the main aim of the teacher should be to ensure that what he/she teaches connects or has a link with the experience learners have. It can therefore, be suggested that teachers who take the direction of constructivism need to emphasize what the learners know and relate it to what they teach. As Jonassen (1997) opined, the learning environment should enable both the teacher and the learner to have clear procedures in class activities and teachers need to create the avenue where learners can relate the topic that they are learning with the environment. The belief is that it would enable learners to gain more knowledge that would further support them to solve issues in their surrounding or environment.

In view of this, the constructivism theory stresses that teachers are required to involve learners effectively in the learning and teaching process and not listening and implementing what they hear from their teachers. This is because, in teaching, the approach adopted by the teacher has a great influence on not only the outcome of the learners in class but also on their future life (Bruner, 1990). Therefore the responsibility of the teacher is to make sure that learners get knowledge by incorporating new approaches such as ICT in their teachings so as to improve their

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performance. This would enable learners to communicate and interact effectively in class and be able to face their real life independently.

2.3.4 Theoretical Framework

This study, given its nature and purpose, adopted the "Social Psychological Theories," "Innovation Diffusion Theory" and the Constructivism Theory. The "Constructivism Theory" was adopted because it focuses on the actual classroom practices and use of ICTs that sees the teacher as the facilitator and the learners as the main centre of interest. The theory stresses on the need to use the learner‟s experience or the previous information learned to construct new ideas or knowledge which is practically useful in a Social Studies classroom. Constructivism theory was thus deemed important to the present study in a way that it helped the research to understand how the Social Studies tutors and their learners were using their previous knowledge, experience and available ICT resources innovatively to gain new knowledge in the various learning institutions.

It has also been observed that both the "Social Psychology Theories" and "Innovation Diffusion Theory" present theoretical background for other ICT theories that emphasize the employment of learners‟ behaviours which could be embraced by people in a positive or negative way. What can be deduced from these theories is that teachers need to develop positive perceptions towards integrating ICT to be able to harness learners‟ behaviours which is seen as the motivating factor on the adoption and use of ICT.

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2.3.5 ICTs Adoption in Teaching and Learning Process

Educational change involves change in practice which denotes altering aspects of current practice (Fullan, 2001). Fullan (2001) refers to the altering of the aspects of current practice as "innovation". Fullan sees innovation as multidimensional and posits that there are three components of dimensions in adopting a new approach or policy. The first one has to do with the possible use of new or revised materials which include the revised curriculum, innovative available instructional resources like in this case ICTs. The second one has to do with the possible use of new teaching and instructional strategies. The last has to do with the possible alteration of beliefs, for example, pedagogical assumptions and theories underlying particular policies, curriculum or programs. Fullan furthered that a teacher may adopt none, one or two or even all the three dimensions. For instance, a Social Studies teacher could use new technology without altering the approach or could use ICTs and alter some teaching behaviours without coming to grips with conceptions, perceptions or beliefs underlying the change.

In consonance with the view of Fullan (2001), it can be emphasized that integration of ICTs in teaching and learning requires the teacher to have technological skills, knowledge and innovativeness for it to be effective. This is to say that integrating ICT into teaching and learning processes requires human factors, particularly teachers; and technical factors, including the availability of hardware and software. In no small way, both the teacher and the availability of software and hardware could assist the learner to receive knowledge in different ways (listen, observe, think, write, speak and even share ideas) and hence improves his or her performance and skills.

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In addition, for the teacher to adopt ICTs in teaching and learning activities, first, he or she must be convinced that technology can more effectively and efficiently meet higher-level goals. Second, he/she must be persuaded that integrating technology will not undermine the achievements of other higher-level goals that he or she considers more effective and operational. Third, he or she should be convinced that use of ICTs can help in improving the quality of teaching and learning while simultaneously cutting down on teaching time. Lastly, the teacher must be made aware that he/she has or will have essential ability and resources to use technology (Timothy, Donald & Russel, 2006).

Several studies, for example Barak (2006), have showed that the use of ICTs in teaching and learning various subjects in education consistently brought about positive effects in performance; motivated the learners; and generally resulted in improved performance. Integration of ICTs in teaching and learning in education encourages deep learning and enables learners to respond better to their varying needs, and also makes available reliable link to various information sources. The indication is that there is a characteristic potential for improved student outcomes when ICT is integrated into teaching and learning (Fitzallen, 2004). Consequently, teachers are therefore expected to explore appropriate means by which they may incorporate ICT into their professional practice.

The studies on ICTs adoption in teaching and learning in education have emphasized some of the issues specific to ICTs employed in schools and institutions of higher learning including the need to employ ICTs in teaching and learning and how to effectively and efficiently employ them. This information from the studies is vital and

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related to our study since it brings to light issues in integration of ICTs in education in general.

2.4 Dealing with Today's Students

To understand the position of ICT in education, an attempt should be made to focus on the nature of today‟s students and how their youth culture exposes the new environment for teaching and learning in the 21st century. In understanding today‟s students, the view of Prensky (2001) captured it all. He indicated that modern students spend their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones and all the other toys and tools of the digital age. He thus exemplified that present-day average college graduates spend less than 5,000 hours of their lives reading, but over 10,000 hours playing video games. One can hence deduce from the view of Prensky (2001) that computer games, email, the internet, cell phones and instant messaging are now essential and integral parts of the lives of students today.

In this context, Bolstad, Gilbert, Vaughan, Darr and Cooper (2006) called modern students “the digital generation” (p. 11) because their birth coincided with the emergence and extensive uptake of today,,s digital tools such as personal computers, the internet and mobile telephones. To them, this involves everyone born between the late 1970s and the mid-1990s. Bolstad et al. (2006) also furthered that the impact of digital technologies has had such an overpowering impact on all aspects of individual life that it has certainly shaped the ideas, hopes and behaviours of those who have grown up before the digital age. They even added that this change has made a substantial impact on social, economic, and cultural development to the extent that

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these young people have begun to assume situations of power and responsibility in their transition to maturity.

Happenings in present times show that the popular media, market research, social science research and people,,s everyday experiences influence general ideas and beliefs about what today,,s young people do with ICT, or what technology is doing to them (Bolstad et al., 2006). In view of this, they added that the media has frequently characterized the prolific use of digital technologies for communication or entertainment as harmful and that it has contributed little towards the growth of young people,,s ability to think and learn.

On the other hand, Bolstad, et al. (2006) explained that "Yet, for every book, magazine cover, or headline that cautions about the risks that digital technologies cause for young people,,s health, development and education, there is a writer seeking to convey the opposite" (p. 14). The implication is that digital technologies are actually helping young people to become smarter and more powerful or they cause less harm than good. Johnson (2005) thus argues that these tools of popular culture like video games and television are helpful in that they can be used to discover meaning in the world or make informed decisions that help the world.

Correspondingly, Gee (2003) and Lankshear and Knobel (2003) suggested that educationists should take a fresh look at the ICT that young people are already engaged with and lead students to integrate ICT meaningfully in teaching and learning so as to bring improvement in the teaching and learning process. Following from the above discussion, the current study maintains that ICTs are very relevant to today,,s generation, and that they can be used effectively to support student learning. This notwithstanding, parents and educators need to guide young people to ensure that they

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are using today,,s technologies appropriately. This has considerable implications for teachers and their use of ICT in their classrooms. Motivated by this background, this current study examines the perceptions of Social Studies tutors towards ICT integration in teaching and learning.

2.5 Measuring ICT Impact on Education

The literature on the role of ICT in education reveals that ICT has the potential of improving teaching and learning if applicably employed. In many countries, this revelation is a major driver of national policies, strategies and investments in ICT in the education sector. In the past few years, researchers in the field of educational technology have spent considerable time assessing the impact of ICT in education. Some researchers concentrated on cognitive measurements while others focused on motivation as a way of measuring ICT impact on education. In subsequent discussions, attention will be turned to reviewing the literature on the cognitive measurements and motivational measurements.

2.5.1 Cognitive Measurement

Cognitive measurement of the impact of ICTs in education critically delves into the relationship between the use of ICTs in teaching and learning and academic performance. Generally, the literature in some studies found real impacts of ICT on performance. In other studies, however, ICTs had no significant impact on performance. The study carried out by Harrison, Comber, Fisher, Haw, Lewin, Lunzer, McFarlane, Mavers, Scrimshaw, Somekh and Watling (2003) in the United Kingdom is considered as one of the most comprehensive investigations into the impact of ICT on academic performance. Harrison, et al (2003) investigated the impact of ICTs on performance at the General Certificate of Secondary Education

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(GSCE) at Key Stages 2, 3 and 4. At Key Stage 2, Harrison et al (2003) found out that there was a strong relationship between ICT use and National Test for English. The results at Key Stage 2 also indicated that the association between ICT use and performance, though positive, was not statistically significant. The results at Key Stage 3 indicated that there was a strong positive association between the use of ICTs and performance in National Test for Science and that there was also a statistically significant positive association between the use of ICTs and Science and Design Technology at Key Stage 4. On the basis of these results, it was concluded that ICT could be used to increase performance in English at Key Stage 2, Science at Key Stage 3 and Design Technology at Key Stage 4 (Harrison et al., 2003).

Schacter (1999) who investigated the impact of educational technology on Fourth and Eighth Grades students‟ achievement using meta-analysis in West Virginia of the United States of America revealed that students who had access to ICT resources performed well in research constructed tests, standardized tests and national tests. Makridou-Bousiou (2006) also conducted a study on the effectiveness of using technology to teach economics in High Schools in Thessaloniki, Greece. The study involved about 65 students who were randomly selected. Out of the 65 students, while 45 were in the experimental group, 20 were in the controlled group. Also, while the experimental group was taught through the creation of web pages for study purposes only, the controlled group was taught without the use of technology. In the end, however, a common test was conducted for both the experimental and the control groups. The analysis of the test result revealed that students taught by technology scored 14.43% on the average and those taught by traditional methods had an average score of 13.4. Makridou-Bousiou (2006) therefore concluded that there was no

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statistically significant difference between students taught by technology and those taught by traditional methods.

In a related study, Fried (2006) who examined the relationship between laptop use in the classroom and learning outcomes among psychology students at Winona State University in the United State of America found a negative relationship. The respondents in that study revealed that laptop use in class diverted their attention. Employing linear regression, the American College Test (ACT), the High School Test (HST), school attendance and rate of laptop use in class of participating students were involved in the equation as independent variables predicting academic performance. The analysis revealed that, with the exception of laptop use, all the independent variables were significant and related positively to academic performance. With regard to the laptop use, the regression produced a beta (β) co-efficient of -0.17, revealing that the more students used laptops, the less their performance. Correspondingly, "t" and "p" values validating the relationship between laptop use and performance were -2.286 and 0.24 respectively.

It can be emphasized that cognitive measurement of ICT impact on education stresses students‟ achievement. It thus pays little or no attention to teachers who are also seen as very important agents in the teaching and learning process. In addition, cognitive measurement of the impact of ICT on education does not give much insight into the teachers‟ perceptions towards the integration of ICT in the teaching and learning process. It is in the light of this that the current study seeks to examine the perceptions of Social Studies tutors towards ICT integration in teaching and learning.

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2.5.2 Motivational Measurement

Unlike cognitive measurement of the impact of ICTs on education, motivational measurement pays a critical consideration to reasons why teachers and students use ICTs and whether or not ICTs help them in doing their work better.

2.5.2.1 ICT and Learning Motivations

Nasir, Munir and Shad (2011) studied the impact of ICT in the education sector in Pakistan. They employed convenient sampling and involved 429 respondents drawn from 5 colleges and universities in the study. In their study, the students agreed that ICT gave them vast knowledge particularly through the internet and digital libraries. Their analysis also revealed that the availability and usage of ICT was very essential and helped to improve the efficiency of students.

In Sze (2005) also established that the use of ICT for teaching and learning had positive motivational effects on students of Cotton Spinners Association Secondary School. Correspondingly, the students indicated that the use of ICTs in teaching made lessons more fun and interesting. The teachers also furthered that students experienced positive motivations for class assignments when multimedia was used. Nonetheless, the positive motivational effect of ICT was found to be higher on males than females (Sze, 2005).

Contrary to the findings of Sze (2005) and Sarfo, Amartei, Adentwi and Charles-Brefo (2011), who investigated students‟ perceptions and motivations towards the ICT for Accelerated Development policy in Ghana among rural and urban schools, found out that female and male students‟ perceptions toward the policy were similar. Sarfo et al. (2011) thus revealed that female and male students had similar perceptions and motivations toward the use of ICT in the classroom for teaching and learning. The

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findings of Sarfo et al. (2011) were in consonance with those of Beacham and McIntosh (2012) who studied student teachers in one of the Universities in Scotland and found out that there were no differences between males and females in terms of their perceptions, confidence and motivation toward the use of ICT infrastructure.

Passey, Rogers, Machell and McHugh (2004) also revealed that the use of ICT in Primary and Secondary schools in England had positive motivations on students‟ perception towards learning. In their study, the students indicated that they enjoyed learning whenever ICTs were used and that students also used the internet to communicate with their teachers on topics connected to their home works when they were off campus. The teachers further reiterated that students were eager to do their home works when they involved a word processing application. The implication therefore is that ICT infrastructure makes lessons more fun, enjoyable and removed difficulties associated with the manual way of doing things. On the other hand, the study indicated that ICTs had positive motivational impacts on boys than girls.

2.5.2.2 ICT and Teaching Motivation

In 1999, the Ministry of Education in New Zealand established the Information and Communication Technologies Professional Development Programme (ICTPDP) to enhance teachers‟ confidence and skills in using ICTs to support teaching and learning. It was revealed at the start of the programme that many teachers were not confident in the use of ICTs for teaching. This is because the study showed that about 44% of teachers were not confident in the use of ICTs for teaching. After the program, however, the number of teachers who were not confident significantly went down from 44% to 3% while the number of teachers who were confident significantly went up to 77% (Sey, 2013).

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In Tanzania, Mwalongo (2011) also revealed that access to the infrastructure mainly motivated the use of ICT infrastructure for teaching. It was thus found that computers and televisions were normally employed by teachers because they had access to them. That is, due to the availability of computers, the teachers used applications such as word processing and spreadsheets for teaching and administrative purposes. On the other hand, the teachers who did not use such applications ascribed it to lack of access to computers when needed. The indication is that teachers‟ motivation to use ICT infrastructure in teaching is more prone to be affected by the availability of ICT resources.

In this context, in a review of literature on the barriers to successful ICT integration into teaching and learning, Bingimlas (2009) showed that lack of access to ICT infrastructure dissuaded teachers from using ICT for teaching. In his study, he observed that ICT infrastructure was not readily available in most schools and that the limited ones were often shared among the teachers for their teaching purposes. This created the situation where teachers needed to book appointments in advance for ICT infrastructure before they could use them.

Hennessy, Harrison and Wamokote (2010) also characterized many challenges to teachers‟ motivation to integrate ICT into the educational process in Sub-Saharan Africa. Some of the challenges identified included lack of reliable access to electricity, limited technology infrastructure and unavailability of software. On the other hand, Hennessy et al. (2010) contended that access to physical infrastructure alone did not motivate teachers to use them for teaching. To them, what was very important to teachers‟ motivation for using ICT infrastructure to deliver lessons was

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the availability of time for teachers to successfully plan towards using ICT in their lessons.

2.6 Factors which Influence Integration of ICTs in the Classroom

The available literature indicates that there are various factors that influence integration of ICTs in teaching and learning. As Mumtaz (2000) noted, there are three interlocking factors that is, institution/school, resources and the teachers. Fullan (2010) also observed that there are several factors which function as limitations or constraints on teaching or effecting change which include: school based factors, students‟ entry behaviours, curriculum materials and resources among others.

2.6.1 School Based Factors

School based factors involve the role of administrators, provision of resources and training. The belief is that the role of administration is vital in implementing change of any sort and to bring about the best pedagogical use of ICTs (Fullan, 1991). The implication is that school administrators present leadership that can encourage teachers to integrate ICTs in teaching and learning activities. In this context, Cogil (2003) suggested that school administrators need to first be ICTs competent, knowledgeable and have practical experience. The view of Cogill (2003) indicates that administrators with ICTs information tend to bring about organizational change of implementing or adopting new development in education and among their staff.

A school can as a result work out a plan that can stimulate and strengthen a culture of collaborative development planning in schools. In view of this, Fullan (2010) further adds that developing collaborative practices in schools leads to better student achievement. School planning here thus involves subject-based planning for its integration with a vision of realizing the capacity of ICTs to motivate and stimulate

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learners and to put together a cooperative and interactive learning environment. Fullan (2010) thus exemplifies that planning should address issues such as the location of computers and other resources to facilitate teachers and learners use and integration. In most colleges in Ghana, the majority of computers in the colleges are centrally located in computer laboratories and students and teachers may not have sole access to them. In all of these, what holds true is that the role of colleges in general and principals in particular through the provision of resources and training would significantly support the integration of ICTs in teaching and learning Social Studies.

In a study by Becker (2000) involving a national survey of over 4,000 teachers in the United States of America to examine patterns of computer use and factors impacting on this computer use, it was found that the unfavourable workplace conditions posed an obstacle to the productive integration of computers in teaching and learning and that the majority of computer use occurred in computer class or business studies lessons. Becker‟s (2000) study also revealed that infrequent use of computers in teaching and learning were due to inflexible scheduling in classes of less than an hour; demands on teachers to cover an extensive curriculum; and classroom access to computers. Becker‟s analysis even proved that 5-8 computers in the classroom encouraged more computer use than their centralization in a computer lab with scheduled access which did not consider teacher or curriculum needs. As a result, Becker (2000) suggested that the creation of centralized access to computers is not a productive investment.

Furthermore, many teachers indicate that attempting to integrate technology into the milieu of classroom activities poses a host of additional problems such as classroom relocation when the required technology is found in specialist rooms, access to

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equipment, system unreliability and a lack of technical support (Deaney, Ruthven & Hennessy, 2006). Probably, the presumption is that teachers feel taking the students to the computer laboratory wastes precious time.

As Zhao and Cziko (2001) observed, teachers were reluctant to devote class time to technology based activities and thought that the time available was meant to prepare students for high stakes state examinations. In the end, the teachers resulted to the use of lecture-based or demonstrative teaching activities when integrating technology, and teaching modes tended to be primarily teacher-centered (Deaney, et al, 2006). Czerniak, Lumpe, Haney and Beck (1999) finally buttressed that support structures in the areas of resources, classroom structures, staff development opportunities and collegial community were necessary to the effective integration of technology in teaching and learning. The view of Czerniak, et al (1999) supposes that the climate and culture of the school significantly affect integration of ICTs in teaching and learning.

2.6.2 Entry Behaviour of Students

The students‟ entry behavior refers to their background, abilities and interests in ICTs. They thus include the students‟ academic and interpersonal skills or abilities to work in groups or interactively with ICTs (Collis, 2003). It is important that the integration of ICTs in teaching and learning takes into consideration the learners‟ entry behavior. This is because an approach to learning becomes meaningful if it is translated into the learner‟s own experience to meet their growing needs (Bagozzi, 2007). This implies that in using ICTs to teach Social Studies, interests of the learners to some extent should influence the teachers‟ approach.

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2.6.3 Curriculum Materials and Resources

Curriculum materials and resources are important in teaching and learning process. This is because they clarify subject content/concepts and make learning easier. The materials could be manipulated in a short time (Posner, 1992). The materials and resources in this study included computer laboratory, Internet facilities, computers, CDs, DVDs, power point projectors, among others.

2.6.4 Tutors' Academic and Professional Qualification

Goble and Porter (1977) opined that the highest level of education attained by the teacher may refer to his/her academic or professional qualification. Such academic or professional qualification forms the professionalism of the teacher and its components involve diagnosis, response, evaluation, personal relations, curriculum development, social responsibility and administration. Diagnosis implies the teachers" ability to accurately estimate the educational needs of an individual. Response refers to the teacher to select an appropriate medium of communication that best conveys the Knowledge and skills being presented. Response thus involves performance capabilities of students and their perceptions. Evaluation refers to the ability to assess and measure the growth or nature of the change that has taken place in the student. Personal relations imply the reactions of the nature of the change in the learner. The teacher should be able to motivate, interpret, build realistic self-esteem in the students and develop his self-assessment. Curriculum development refers to the planning of teaching-learning activities. It thus includes the breakdown of the subject matter into a sequence of units, with each one being manageable within the allotted period of time (Goble & Porter, 1977).

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For effective performance, the integration of ICTs in teaching and learning in education needs upgrading of teachers knowledge and appropriate skills. Becker (2000) hence proved that teacher limitations in terms of skills and knowledge in the use of computers hindered integration of computers. Becker (2000) therefore concluded that the integration of computers and other ICTs require teachers who are personally comfortable and at least moderately skilled in using computers themselves; thrives well in schools which allocate time for students to use computers as part of class assignments and where computer activities flow alongside other learning tasks.

Roblyer, Edwards and Havriluk (2004) also argued that teachers need new pedagogical skills to take full advantage of ICTs to improve learners‟ learning. They therefore contended that teachers need some training to equip them with the required knowledge on how to develop an appropriate and effective lesson that requires the use of ICTs in order to ensure effective teaching and learning. The implication therefore is that ICTs integration in teaching and learning of Social Studies requires teachers who are very innovative to create suitable environments and learning situations expected. In this context, it can be suggested that relevant training and qualification for teachers assist them to make essential changes in their classroom pedagogy. As Frost and Sullivan (2010) observed, the training of teachers in computer skills helps in improving students‟ achievement, adoption of ICTs in education and also boost focus on interaction among students as well as between students and teachers. This is supported by Bullock (2004) that one of the factors that enabled or disabled teacher use of technology in teaching and learning was the way teachers felt about using technology.

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In this context, UNESCO (2007) contended that the classroom teachers need to be trained in four major areas. The first area is the awareness and perception which includes awareness of technology‟s value, self-assessment and concepts of lifelong learning. The second is knowledge and skills which consists of concepts and skills. The third is integration and innovation which entails designing and implementing technology-supported lessons and activities, using technology to support teaching and management. Using technology to enhance research and professional development is the fourth area. The final area is using technology to mediate collaboration and communication. This presupposes that integration of ICTs in teaching and learning requires teachers to implement new skills of using computers, alter their pedagogical beliefs, and develop a positive feeling about their work and competence in using ICTs. This notwithstanding, implementing a new approach or change in practice may also involve learning to do something in a different way to improve on existing quality.

2.6.5 Teaching Experience

Teaching refers to both individual teacher characteristics and collegial factors (Fullan, 2001). He added that the teachers‟ individual characteristics and collegial factors like relationship with other teachers and learners play significant roles in determining change in practice. This is further buttressed by Ooko (2006) that the psychological state of a teacher can be relatively predisposed towards change and that teachers who are more self-actualized have a superior sense of efficacy, which enables them to take action and persist in the effort expected to bring about successful change.

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The literature shows that an experience in teaching plays an important role for effective integration of ICT in curriculum delivery. In fact, the available literature has established no connection between ICT integration and teachers‟ years of teaching experience. For example, Chemwei, Njagi and Kiboss (2016) disclosed that the experience of teachers has a substantial influence on adoption and use of technology in daily classroom activities. Deen-Swarray, Gillwald and Morrell (2012) also indicated that teachers with extensive teaching experience were aged and therefore had a low self-efficacy in access and ease of use of ICT tools in classroom activities. In this context, Chemwei et al. (2016) exemplified that teachers in the age bracket of 41-50 years and above in the teaching profession had challenges using computers.

This is to say that the period of time in which the teacher started or served in teaching, influences the adoption and use of ICT in teaching and learning. That is, the length of service of teachers in the teaching profession has an effect on the use of ICT in daily classroom activities. This is supported by Mulwa and Kimosop (2015) that the teachers who served in the teaching profession for long periods have no interest in ICT. This suggests that teachers with fewer years in teaching profession may tend to be enthusiastic, skilled and interested in the use of ICT tools in the teaching and learning processes. In a related study, Dix (2007) found that earlier-career teachers had more positive view towards ICT use in teaching and learning than recent-career teachers. The presupposition therefore is that the number of years of teaching experience of a teacher has a direct relationship with the use of ICT in teaching. The bottom line is that the more experienced the teachers are, the more they tend to readily use technology in teaching and learning processes.

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2.7 Influence of Teachers' Perception on ICT Integration

Perception has been explained as a predisposition or inclination to respond favourably or unfavourably to an object, an idea or a new innovation (Ajzen, 2005). Fishbein and Ajzen (2005) also opined that perception refers to that learned predisposition to respond to an object or class of objects in a consistently favorable or unfavorable way. In this context, it can thus be seen as the teachers‟ perception or a state of mind or feeling towards integration of ICTs in teaching and learning of Social Studies.

It has been observed that the integration of ICTs in the teaching and learning process to a large extent depends on teachers‟ perception which has been termed as a key factor in accepting it in their pedagogical practices or their actual use (Baylor & Ritchie, 2002). The view of Baylor and Ritchie (2002) predisposes that, for teachers to embrace ICTs, they must have a positive tendency or see it as a very efficient means to achieve pedagogical objectives with regard to their current teaching practice (Timothy, et al, 2006). It also implies that the amount of confidence a teacher possesses in integrating ICTs in teaching to a great extent influences his or her effective implementation and therefore improving his/her teaching and learning activities.

In view of this, it can be said that teachers‟ perception to change has effect on their willingness to integrate technology into classroom activities. Shazia (2000) thus revealed that teachers with positive perceptions towards technologies were positively inclined towards using ICT in the teaching and learning process. In a related study, Bukaliya and Mubika (2012) showed that one major factor that militated against the introduction of computer education in secondary schools in Zimbabwe was the teachers‟ negative perceptions towards use of ICT in education. On the other hand,

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studies such as Kurga (2014), Mwathi (2014), Mingaine (2013) disclosed that positive perception towards new technology did not predict ICT integration. They thus concluded that teachers‟ positive perception towards technologies did not significantly influence their perceived ability and intentions to integrate and use ICT in classroom activities.

Fishbein and Ajzen (2005) further posited that teachers‟ perception on an object may be objectively true or mere opinions, prejudice or stereotypes and that it could be influenced by gender, education, training and profession, religious convictions, individuals‟ character, personality and even relationship with others. Correspondingly, Omollo, Indoshi and Ayere (2013) showed that males had slightly more positive perception toward ICT use than females. Gode, Obegi and Macharia (2014) also agree with Omollo, et al (2013) that male teachers had favourable perception towards use of computers than female teachers. A related study by Birgit (2011) further uncovered that negative perception of female teachers towards technology hindered them from effective integration of ICT in the teaching and learning process.

Since teachers are the main gatekeepers in allowing innovations to diffuse into the classrooms or as the key factors for effecting an integration of ICTs in teaching, it is expected that the teachers be trained adequately in order to handle and manage the computer resources in their daily practices. Hence, it is essential that the training concentrates on how to integrate ICTs effectively into the curriculum to persuade the teachers of its usefulness. As Vanderlinde and Braak (2011) noted, since teachers had never used ICT tools in teaching, it would be helpful to initiate more prudent measures and initiatives in order to improve teachers‟ perceptions towards

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implementation of curriculum through technologies. Guoyuan (2010) corroborates this by observing that the developing need for instructional technologies with 21st century skills can promote equal career prospects in technologies for male and female teachers. Similarly. Carrington and Robinson (2010) indicated that positive perceptions towards ICTs were positively correlated with teachers‟ extent of computer technology.

A study conducted by Harrison and Rainer (1992) on ICT integration in teaching and learning among the teachers in the Southern United States showed that many of them were less skilled in computer use and therefore had a negative perception about it. Another study carried out by Albirini (2006) to study Science teachers‟ perception on ICT integration in teaching and learning in Syrian High Schools indicated that the teachers had a positive perception towards integration of ICT in the teaching and learning process because the majority of them were interested in developing their ICT skills and knowledge.

2.8 Challenges of Integrating ICTs in Teaching and Learning Process

Challenges have been described as factors that hinder integration of ICTs in teaching and learning activities in various subjects in schools or have been defined as any condition that makes it difficult to integrate ICT by teachers in the classroom (Becta, 2004). Various studies have classified challenges into different categories. Ertmer (1999) for instance broadly classified the challenges into two groups: extrinsic and intrinsic. Ertmer (1999) saw extrinsic challenges as first order challenges which include access, time, support, resources and training, intrinsic are second order challenges that include perceptions, beliefs, practices and resistance. Becta (2004) also characterized that the challenges ranged from teacher-level to school level and

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thus exemplified that teacher level challenges include lack of time, lack of confidence, lack of competence and resistance to change. Becta (2004) also explained that school level challenges involve lack of effective training, lack of access to resource, time, and technical support among others. In addition, Goktas, Yildrim and Yildrim (2009:98) showed that "overcrowded classrooms, lack of computer laboratories and presentation equipment" were barriers to ICT implementation in learning. Balanskat, Blamire and Kefala (2006) on the other hand classified barriers to ICT integration as „micro level" (teacher perception) and „meso level" (institutional). They also added a third category called „macro level", to account for the wider educational system. In the subsequent sections, these challenges will be discussed.

2.8.1 Teachers' Lack of Confidence

The available literature shows that one barrier to integrating ICTs in teaching and learning is teachers" lack of confidence. As Beggs (2000) noted, teachers" fear of failure causes lack of confidence. This is further explained that, because many teachers lack ICT skills, it makes them feel anxious about integrating it in their teaching and learning activities in the classroom. In the end, it affects their confidence to use it (Becta, 2004). Becta (2004) also found that teachers who lack confidence lacked enough knowledge in ICT like operating computers, using basic software and related ICT resources for instruction and accordingly were afraid to use it because they felt that some of their learners may perhaps be more knowledgeable.

In assessing the ICT situation in Secondary Schools in the Lower Manya Krobo District in the Eastern Region of Ghana, Teye (2012) revealed that many factors influenced teacher" confidence in using ICT infrastructure for teaching. Some of the factors that were found to have influence on teachers" motivation and confidence in

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using ICT for teaching included lack of knowledge about computers, fear of using computers, lack of training and insufficient time to use computers to plan lessons.

2.8.2 Time Limitation

Lack of time may be a challenge for teachers to integrate ICTs in their teaching and learning activities. This is because teachers need time to plan for their lessons, explore internet sites, look at various aspects of software, and make ready power point presentations, among other things. Korte and Hüsing (2006) also observed that even though many teachers had confidence and competence in integrating ICT in their teaching and learning activities, they did not have enough time to do so since they tended to use more time in preparing students for tests and high stakes examinations. The researcher‟s observation also show that college tutors tend to use more time in lecturing or designing projects, quizzes and assignments and devote very little or no time on integrating ICT in their classroom activities. More often than not the tutors are preoccupied with the completion of the course structure for the semester coupled with the belief that what matters most is ensuring that the students pass and that does not require involving ICTs in the teaching and learning.

2.8.3 Teachers' Competence

Newhouse (2002) uncovered that many teachers without skills and knowledge were not enthusiastic about integration of ICT in their teaching activities and that made it difficult for them to adopt it. Lam (2000) also added that teachers with no experience with computer did not even try to work with it because they felt they could look like idiots and more stressed. Such teachers, Lam (2000) noted, tended to avoid completely integrating ICT into their teaching and learning activities. Research carried out by Bill, Jesse and Acosta, (2001) in Silicon Valley in America also

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confirmed that less than 10% of the teachers use computers in their classroom and many were reluctant due to lack of skill.

2.8.4 Technical Support

Lack of technical support in ICT integration in education has also been characterized as a challenge to many teachers (Lewis, 2003). Gomes (2005) also uncovered that technical support is one of the main problems that affect integration of ICT among the teachers. Some examples which are classified as technical challenges include internet connection failure, malfunctioning computers, and waiting for websites to open. Gomes (2005) in the end recommended that the school should employ technicians to rapidly check on the computer facilities and operations and if not this could be a big challenge to the teachers.

2.8.5 Lack of Computer Infrastructure

Computer materials, facilities and equipment are indispensable in integrating ICTs in teaching and learning. In fact, it has been observed that insufficient numbers of computers and insufficient funds prevent schools and teachers from using computers for teaching and learning. In some African countries, Draxler (2002) showed that Egypt with a total of 32,120 schools had 10,000 computers, Namibia with 1,520 schools had 60, Ghana with 35,000 had 500 computers as the highest number of computers in schools (31.25%). Also, even though Ghana and South Africa have computers, it is clear that only 1.43% and 17.4% of schools have access to computer respectively. The implication is that the insufficient numbers of computers and other related ICT resources hinder schools from using computers for teaching and learning (Draxler, 2002).

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The view of Draxler (2002) is in consonance with the view of Mumtaz (2000) that access and lack of technological resources seriously limit what teachers can do in the classroom with regards to integration of ICT. Menda (2006) also confirmed that lack of software Internet tend to limit individual and community access to ICT and pose a major barrier to its integration with curricula in schools. This challenge has been prevalent in Africa. As Farrel (2007) found, most rural areas in African face external systematic factors like electricity, network configuration, frequent power break downs and power cuts that even tend to increase cost of ICT infrastructure making rural areas almost impossible to access and integrate ICT in teaching and learning process.

2.9 Challenges of Integrating ICTs in Teaching and Learning Social Studies

Diem (1983) revealed that the major challenge for the Social Studies teacher was finding how to use the new tools and techniques in ways that will boost content understanding and enhance the skills needed to effectively use technology. In this context, Fontana (1997) argued that such a challenge needs to be looked at quickly by Social Studies educators, if the discipline of Social Studies is to maintain its vitality, direction, and integrity. The indication is that there is a sense of urgency and concern that comes with failing to utilize technology when one begins to explore the actual use and impact of interactive technologies in Social Studies, and on the nature of teaching Social Studies.

The available literature, in fact, also reveals that across all disciplines and not only Social Studies, computer technology has not been integrated into the classroom. In situations where it is used, little evidence exists to suggest that it has transformed the teaching and learning process (Ehman & Glenn, 1991).

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Within the Social Studies curriculum, technology has been equated to a sleeping giant. (Martorella, 1997). The view of Martorella (1997) was that even though many Social Studies educators contend that interactive technologies hold a great deal of potential for the teaching and learning of Social Studies, little technology research, development, and implementation has taken place among Social Studies educators (Ehman & Glenn, 1991). This is to say that many Social Studies educators hold "giant" opinions about the impact of technologies on teaching and learning of the subject but they have either failed to integrate ICTs in the classroom activities or failed to investigate the ways ICTs can appropriately be integrated. Specifically, the implication is that the call for technology integration into the Social Studies classroom is clear and strong, but the application of technology within the realm of Social Studies has traditionally and obviously been theoretically underdeveloped. It is in the light of this that Swan and Hofer (2008) resonated the need for more work to be done to address the use of technology to provide cognitive support for various thinking processes in a diversity of school settings.

In addition, Whitworth and Berson (2003) who conducted an extensive review of Social Studies and technology literature uncovered a dramatic increase in the number of publications touting the uses of technology in the Social Studies classroom. They also identified a scarcity of research as well as disconnect between the uses of technology and the goals of Social Studies education. This implies that the subject needs more theory-driven research. When one takes into consideration the emerging trend, one notes that Social Studies as a teaching field has apparently been clinging to a specific patterned genre of teaching (Shaver, 1991). The traditional situation has normally been the situation where the teacher talks and students listen; where students

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are directed to read and answer questions in textbooks; where they are guided they are expected to memorize facts and details.

This traditional Social Studies teaching which is "yoked to the textbook, captive to talk and chalk" (Hope, 1996, p. 150) does not augur well for those who are challenging Social Studies educators to integrate technology. The implication is that Social Studies teachers" pedagogical methods of instruction have been dominated by teacher-centered methods of instruction. Undoubtedly, it has been observed that this dominance results from the large amount of content that Social Studies teachers feel they must teach vis-a-vis the amount of time they are given to teach that information. The discussion shows that in spite of the potential of ICTs to enhance the teaching and learning process, Social Studies teachers appear to have been unwilling to integrate computers into their curriculum and instruction.

As Gulbahar and Guven (2008) on computer usage by Social Studies teachers in Turkey found, 53.1% used a computer for less than one hour, 30.7% used a computer for between 1 and 3 hours, 2.8% used a computer for between 3-5 hours and 1.5% used a computer for more than five hours a day. The case in Ghana is very much similar. For example, Boakye & Banini (2008) uncovered that 71% of teachers (which includes Social Studies teachers) in Ghana never integrate the computer in class be it using a computer during class time or taking students to the computer laboratory. This thus implies that the extent to which the potential of technology is being fully integrated in the Social Studies classroom has not been sufficiently explored by teachers. It is against this backdrop that this current study seeks to investigate the perception of Social Studies tutors in Ghana towards integrating ICTs in the teaching and learning of Social Studies.

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2.10 Chapter Summary

This chapter has critically examined the literature related to the study. Both literature reviewed from the studies done locally and internationally have brought to light some of the issues specific to integration of ICTs in education for example adoption of ICTs by educational managers, challenges and evaluation. The literature was arranged thematically according to the objectives and questions of the study and involved the following: nature of information and communication technology (ICT); technology integration in education; ICT adoption theories; theoretical framework; ICTs adoption in teaching and learning process; dealing with today's students; measuring ICT impact on education; factors which influence integration of ICTs in the classroom; influence of teachers‟ perception on ICT integration; challenges of integrating ICTs in teaching and learning process and challenges of integrating ICTs in teaching and learning Social Studies. The literature review indicated that even though integration of ICTs in all spheres of life has well been documented and reflected in education broadly, the situation is worrisome when one looks at the integration of computer assisted learning in education particularly at the level and nature of integration.

In addition, it has come to light that for ICTs to have the desired impact on teaching and learning, the provision of ICT infrastructure and the capacity of teachers and students to use the infrastructure should be given primacy. The literature reviewed, furthermore, highlights that there exist theories and models on ICTs adoption that have been employed in several studies. The literature reviewed has also revealed that not many studies have been done on integration of ICTs in teaching and learning in the area of Social Studies. Finally, the related literature reviewed shows that there is little or no information on the perceptions of teachers towards ICTs integration in

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teaching and learning particularly in Ghanaian schools. Significantly, this study seeks to make contribution in this area.

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CHAPTER THREE

METHODOLOGY

3.0 Overview

The research methodology discusses how the study was undertaken and the basis for the adoption of the various procedures. According to Creswell (2009), research methodology describes the theoretical, conceptual framework and philosophical assumptions upon which research is based and the implications of these concepts for the method or methods employed in the study. This chapter therefore describes the research design employed in achieving the research problem, the target population as well as the accessible population. Moreover, it also outlines the sampling procedure used to select the sample of participants for the study, data collection procedure, instrument for data collection, ethical issues and data analysis plan. The methods of checking reliability and validity of the research instruments have also been explored under this chapter.

3.1 Philosophical Underpinning

According to Saunders, Lewis and Thornhill (2012), research philosophy concerns researchers‟ view of the world, and the assumptions they make about social realities. The research philosophy that a researcher aligns with, depends on the researcher‟s view of reality along with their view of knowledge and how knowledge is generated (Saunders, 2009). In essence, the philosophical stance of researchers reflects their understanding of what constitutes social reality, and what makes authentic knowledge as well as the processes and procedures to arrive at that knowledge. In this regard, Bryman (2008) classifies the philosophy of research into epistemology and ontology.

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Epistemological perspective is concerned with the way knowledge is acquired, and it absolutely depends on the relationship between researchers and how they perceive social reality (Creswell, 2009). Bryman (2008) identifies two research epistemologies. These are positivism and interpretivism.

The positivist epistemological viewpoint suggests that the only authentic knowledge is derived from structured and controlled procedures as contained in the natural sciences like Chemistry, Biology, and Physics (Bryman, 2008). This view implies that most reliable knowledge is acquired when researchers follow planned and rigid processes to arrive at that knowledge. On the contrary, the interpretivist philosophy acknowledges the complexity in human interactions and social behaviours, and views knowledge as being created through interpretations of these social constructs (Saunders et al., 2012). Therefore, knowledge is acquired based on the interpretations that social actors give to social phenomena. It is inferred from this view that researchers who ascribe to the interpretivist philosophy are unable to adopt inflexible procedures to arrive at knowledge due to the dynamics of social behaviour of human beings.

The ontological assumptions "...concern the ideas about the existence of and relationship between people, society and the world in general" (Eriksson & Kovalainen, 2008, p. 13). Two types of ontology are identified. These are objectivism and constructionism (Bryman, 2008). Researchers of the objectivist"s tradition argue that social reality is "out there", external and independent of the researched, and therefore it can be accessed through natural scientific approaches in physics, chemistry and biology that are objective in nature (Cohen, Manion & Morrison, 2011). Therefore, the researcher becomes a distant observer of social phenomena

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where instruments like structured questionnaires and non-participant observation guides and checklists are applicable. On the other hand, constructivist ontology views reality as the creation of the researched, and their existence depends on the researcher's subjective awareness and experiences (Saunders et al., 2012). Hence, the researcher is expected to interact with the researched so as to understand and interpret social reality from the perspective of the researched. Here, instruments such as open-ended and semi-structured interview guides and participant observation protocols are appropriate. This study, therefore, adopted the positivist epistemology and objectivist ontology for the study.

3.2 Research Design

A research design refers to a master plan, or an outline specifying the procedure to be used in seeking an answer to the research questions. Research design describes the conceptual structure in which research is conducted and this constitutes logical sequence, the blue print for data collection, analysis of data and measurement of variables used in the study (Sekaran, 2006). In essence, a research design refers to the procedures and processes that a researcher adopts to collect, analyze, and interpret data so as to provide answers to research questions or hypotheses.

The study was conducted in a quantitative framework and specifically utilized the descriptive survey research design. Quantitative research design utilizes statistical methods, models and numeric data to test hypothesis, draw inferences and comparisons between variables, and the results from quantitative research can be generalized (Harwell, 2011). The quantitative research methodology involves data collection procedure such as the use of questionnaire or data analysis procedure such as descriptive statistics that generates or uses numerical data in a research.

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According to Kerlinger (2004), descriptive survey research studies are designed to obtain pertinent information concerning current status of phenomenon. This method is suitable because it determines the nature of existing state and is a self-report study which requires the collection of quantifiable information from the sample. It is efficient in collecting large amounts of information within a short time. A descriptive survey is a method for systematically obtaining uniform information about the perception, attitudes and any other characteristics of a target population (Seidu, 2007). This involves a pre-determined set of questions to be administered to the research units. A primary cross-sectional data were collected from selected respondents at a point in time on identified variables relating to the respondents. During the study, no special inclusion and exclusion criteria were considered and all the Colleges were given equal chance to be selected in as much as they satisfy the requirements of the sample statistics.

3.3 Population of the Study

Population describes the total or aggregate set of people or events or subjects in a particular area from which a sample for a study is selected (Creswell, 2009). The population can be target population or accessible population. The target population is the kind of population about which information is wanted and on which generalization is made. The target population for the study constituted all the Social Studies tutors in the 46 public Colleges of Education in Ghana. However, the accessible population involved those Social Studies tutors the researcher can realistically get for the study. This comprised 152 Social Studies tutors in the public Colleges of Education in Ghana. National Council for Tertiary Education, (2017).

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3.4 Sample Size

Out of the 152 Social Studies tutors in the public Colleges of Education in Ghana, 130 Social Studies tutors were selected to participate in the study. These tutors constituted those who had specialized in the teaching of the Social Studies course as professional tutors. This sample size was based on Gall, Gall and Borg"s (2007) recommendation that at least 50% of the target population is representative in descriptive surveys. The researcher wanted a sample size that was greater than the minimum as suggested by Gall, Gall and Borg (2007). In this study, the sample size of 130 was deemed adequate for the study because it constituted about 86% of the accessible population.

3.5 Sampling Technique

Sampling is the process of selecting subjects of a study from the study population (Creswell, 2009). Several sampling methods have been designed for selecting participants for a study, and a sampling technique may be probability or non-probability method. In the probability method, all the elements within the target population are given equal chance to be selected and it is done randomly so that every member has an equal chance of being selected. With the non-probability method, the selection is not done randomly, therefore, the chance that a person would be selected is unequal for all members.

The study employed stratified random sampling technique to select the sample. In the stratified random sampling, the members of the population are classified into homogeneous subgroups, called strata, before sampling (Fowler, 2009). The strata should be mutually exclusive whereby every member of the population must be assigned to only one stratum (Saunders, Lewis & Thornhill, 2009). After the stratification, the simple random sampling technique was used to select participants

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from each stratum. There are advantages in adopting the stratified random sampling technique in quantitative studies. This improves the representativeness of the sample as it has the potential for reducing sampling error. This occurs because the stratified random sampling has the potential to relate the sample closely to the population since portions of the total sample are taken from different subgroups.

In carrying out the stratified random sampling technique, the researcher developed a sampling frame. A sampling frame includes the actual list of individuals included in the population (Nesbary, 1999). The researcher had a list of all the tutors from the management of the colleges. Secondly, the researcher categorized the list of tutors based on gender. Thus, the male tutors formed a stratum and the female tutors constituted another stratum. The males (61%) were more than the females (39%) in the target population. Finally, a simple random sampling was used to select the tutors from each stratum. The proportionate stratified random sampling was used where the selection was based on the proportions of each gender in the target population. Therefore, 61% of the sample size (130) for the male tutors resulted in 79 tutors while the remaining 39% for the females was 51 tutors. In carrying out the simple random sampling, „Yes" and „No" were written on pieces papers of paper, and those who picked „Yes" were included in the study while those who chose „No" were excluded from the study.

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3.6 Instrument for Data Collection

A structured questionnaire was used for the study. The use of the questionnaire promises a wider coverage and gives assurance of greater anonymity. Again, questionnaires are completed at respondents‟ convenience, and it is less expensive than other methods such as interview (Saunders, Lewis & Thornhill, 2009). The questionnaire items used in this study were divided into five main sections. The first Section covered the demographic characteristics of participants, Section II constituted the knowledge and skills of participants on ICT devices and their applications while the Section III contained items on perception of participants towards the importance of integrating ICT into teaching and learning of Social Studies in the public Colleges of Education in Ghana. Moreover, Section IV contained items on participants‟ perceptions towards the challenges of integrating ICTs into teaching and learning of Social Studies while Section five (V) covered items on participants‟ perceptions on measures to enhance the integration of ICT into teaching and learning of Social Studies. The questionnaire items comprised both the 5-point Likert type scale such that Strongly Agree (SA) =5, Agree (A) =4, Neutral (N) =3, Disagree (D) =2, and Strongly Disagree (SD) =1, as well as „Yes‟ or „No‟ responses.

3.6 Pilot-test of Instrument

Pilot-testing of instruments refers to “A preliminary administering of instruments carried out before the full research to test out data collection instruments and other procedures” (Gerrish & Lacey, 2006, p. 538). The pilot-test assisted the researcher to identify and discard all unnecessary, difficult or ambiguous questions, and provided the opportunity to re-word or re-scale any question that would be answered wrongly (Kerlinger, 2004). Again, the pilot test helped the researcher to record the time that was taken to complete the questionnaire by each of the respondents on the field

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survey and decided whether that time allocation would be appropriate. The pilot-test was conducted in two public Colleges of Education, and the results were used to test the validity and reliability of the research instrument (questionnaire).

3.6.1 Validity

Validity of an instrument is the extent to which a research instrument measures what it is intended to measure (Oso & Onen, 2011). In this study, face validity and content validity were checked. Face validity refers to whether the instrument appears as though it is measuring the appropriate construct (Polit & Beck, 2008). The questionnaire was given to colleagues on the master‟s programme to check for grammatical errors, the length of the items, and the difficulty level of the language used. Their views were considered to fine-tune the questionnaire.

Polit and Beck (2008) defined content validity as the adequacy of items of an instrument in measuring the concept under study. The instrument was given to my supervisors and lecturers who have knowledge in the issues under study to determine its content validity as suggested by Gall, Gall and Borg (2007) that content validity of an instrument is granted through expert judgment. These experts made suggestions that were applied in reshaping the instruments.

3.6.2 Reliability

Reliability refers to the extent to which the data collection technique or analysis procedures would yield consistent findings (Creswell, 2007). Reliability therefore means that the result would be the same even if another researcher carries out the research on a different location. Internal consistency of the study tool was determined with the calculation of a Cronbach‟s alpha score. The Cronbach's alpha is a commonly used reliability indicator that estimates the extent to which different sub

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parts of an instrument are reliably measuring the critical attribute (George & Meary, 2003). The typical values range from 0.00 to +1.00, and higher values reflect greater internal consistency. Kothari (2004) offered the following guidelines regarding interpretation of Cronbach's alpha scores: ≥0.9 is excellent, ≥0.8 is good, and ≥0.7 is acceptable, ≥0.6 is questionable, ≥0.5 is poor, and ≤0.5 is unacceptable. Using this guide of the Cronbach"s alpha score, the reliability test results of the research instrument is presented in the Table 3.1.

Table 3.1: Results from reliability test of research instruments

	Items	Number of Items	Cronbach's Alpha Score
1.	Knowledge and skills in integrating ICT into teaching and learning Social Studies.	35	0.85
2.	Perception of the benefits of integrating ICT into teaching and learning Social Studies.	20	0.76
3.	Perception towards the challenges in integrating ICT into teaching and learning Social Studies.	20	0.86
4.	Perceptions of the measures to enhance the integration of ICT in teaching Social Studies.	12	0.91
	Total	**87**	**0.90**

Source: Field Survey (2018)

The reliability results in Table 1 showed that the reliability of the questionnaire items was excellent for the perceptions of the measures to enhance integration of ICT in teaching and learning Social Studies (0.91). Besides, all the items of the other themes were within the acceptable rage and were signs of a reliable instrument for a study to achieve the intended results (Kothari, 2004).

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3.7 Data Collection Procedure

Polit and Beck (2008) explain data collection as the gathering of information needed to address a research problem. The researcher acquired an introductory letter from the Department of Basic Education, University of Education, Winneba, which gave access to the colleges. The researcher used one month for the data collection which commenced from 2nd April, 2018 to 30th April, 2018. The researcher approached the Social Studies tutors, explained the purpose of the study to them, and sought their consent to participate in the study. The researcher administered the instruments to the respondents with the help of research assistants. These research assistants were trained by the researcher so that they could collect data in a uniformed and standardized manner to avoid bias. Some of the respondents filled and returned the questionnaires immediately while others asked for some time to complete them. The researcher reminded the respondents through phone calls, and with the research assistants made follow up visits to the colleges to retrieve the questionnaires.

3.8 Data Analysis Procedure

The researcher first checked and read through the questionnaire to determine those that were not responded to, and those with a lot of missing data. The data were then coded and entered into version 20 of SPSS computer software. The results were presented in tables where statistical computations such as frequency, percentages, mean scores, standard deviation, t-test and ANOVA were performed. Descriptive statistics such as mean and standard deviation were used to analyse the research questions. The hypotheses were analyzed using inferential statistics like t-test and ANOVA. Specifically, the hypotheses considered the relationship between age, sex, academic qualification and teaching experience of respondents and their use of ICTs in terms of teaching and learning Social Studies. The t-test was used to examine the

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mean difference in terms of use of ICTs and respondents sex while the ANOVA was used to compare the mean differences of respondents‟ age, academic qualification, and teaching experience with their use of ICTs. The hypotheses were tested at 0.05 level of significance.

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CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

The purpose of this study was to investigate the perception of Social Studies tutors in some selected Collages of Education in Ghana on the integration of ICT devices into teaching and learning activities. This chapter presents and discusses the main findings of the study using both descriptive and inferential statistics for the analysis in line with the research questions posed for the study. The statistical package for social sciences (SPSS) computer software was used to analyze the results. The hypotheses were tested using t-test and ANOVA.

4.1 Response Rate

A response rate of about 92% was achieved in this study because from a total of one hundred and thirty (130) questionnaires distributed, one hundred and twenty (120) questionnaires were used for the analyses. This response rate was achieved because eight (8) questionnaires were not returned, and two (2) were poorly answered, and as such they were not used for the analysis. The researcher made numerous attempts to get back the questionnaire, but the respondents did not return them. However, this response rate was considered adequate for the study based on the suggestion of Babbie (2004) that a response rate of at least 50% is adequate in surveys.

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4.2 Demographic Features of Respondents

The various socio-demographic characteristics of the participants such as age, sex, academic qualification and teaching experience were examined and discussed in the study. These variables were selected since they are key factors that previous studies found to influence the perception of respondents (Becker, 2000; Deen-Swarray, Gillwald & Morrell, 2012). The demographic characteristics of the respondents were presented in Table 4.1.

Table: 4.1 Demographic Features of Respondents

Variables		Frequency (n)	Percentage (%)
Sex	Male	74	61.7
	Female	46	38.3
Age	Below 31	4	3.4
	31-40	28	23.3
	41-50	57	47.5
	51-60	31	25.8
Academic Qualification	Bachelor's Degree	4	3.3
	M.ED	114	95.0
	M. Phil	2	1.7
Years of Experience	1-5	21	17.5
	6-10	44	36.7
	11-15	29	24.2
	16-20	16	13.3
	Above 20	10	8.3

Source: Field Survey (2018)

The results from Table 4.1 showed that participants of the study were predominantly males, representing 61.7% while their counterpart females constituted 38.3%. The ages of the respondents ranged from below 31 years to 60 years. Out of 120 respondents, 57 (47.5%) were within the age range of 41-50 while 31(25.8%) were within the age group of 51-60. However, four (4) respondents representing 3.4% were below 31 years.

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With regard to the academic qualification, 114 (95%) respondents had Master of Education degree, four (4) representing 3.33% had first degree, and two (2) had Master of Philosophy degree as their highest academic qualification. The results revealed that, 10 (8.3%) of the respondents had taught in the public Colleges of Education for more than 20 years while most of them had 6-10 years teaching experience representing 36.7%. Similarly, 24% of the respondents had 11-15 years teaching experience while 17.5% of them had 1-5 years‟ experience in teaching. The results confirmed the assertion that, most of the tutors in the public Colleges of Education are males and have obtained their second degree as the required qualification to teach at the college level, coupled with long years of teaching experience (Deen-Swarray, Gillwald & Morrell, 2012). These are some significant factors that affect the decision and perception of college tutors on adoption of technology and innovations.

4.3 Findings and Discussions

The findings of the study as derived from the analysis of data as well as their discussions were presented in this section. The findings and the discussions were presented based on each research question and hypothesis.

Research Question 1

How are Social Studies tutors in the public Colleges of Education in Ghana familiar with the use of ICT in teaching and learning Social Studies?

The first research question investigated the extent to which Social Studies tutors were familiar with the use of ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana. Table 4.2 presents the results on access to ICT devices in teaching Social Studies in the public Colleges of Education.

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It is observed from Table 4.2 that the Social Studies tutors had access to their personal computers most (M=3.67, SD=0.67), followed by desktop computers of the college (M=3.25, SD=0.52), laptop computers of the college (M=2.10, SD=1.17), availability of projectors (M=1.67, SD=0.95), accessibility to internet (M=1.35, SD=0.88) availability of IPAD (M=1.21, SD=0.74), and availability of Palmtop computers (M=1.01, SD=1.06).

Table: 4.2 Access to ICT Devices

Access to ICTs	N	Min.	Max.	Mean	Std. Deviation
Availability of Personal Computers	120	1	5	3.67	0.67
Availability of Desktop Computers	120	3	5	3.25	0.52
Availability of Laptop Computers	120	1	5	2.10	1.17
Availability of projectors	120	1	5	1.67	0.95
Accessibility to internet	120	1	5	1.35	0.88
Availability to IPAD	120	2	5	1.21	0.74
Availability of Palmtop Computers	120	1	5	1.01	1.06

Source: Field survey (2018)

Based on the 5-point Likert-type scale used where the mean score is 3.0 (5+4+3+2+1), it could be concluded that the Social Studies tutors had access to personal laptop computers and desktop computers but they did not have adequate access to other ICT tools.

The study further investigated the level of knowledge of the Social Studies tutors on the application of ICT tools in teaching and learning Social Studies in the public Colleges of Education, and the results are presented in Table 4.3 When the mean score falls in the range of 5.0 to 3.4, it was interpreted that the Social Studies tutors in

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the public Colleges of Education in Ghana had adequate knowledge in the use of ICT in teaching and learning Social Studies. When the mean score is from 3.3 to 2.5, it was interpreted that the respondents were neutral in their perception, and when the mean score is less than 2.5, it was considered as low knowledge in the application of ICT in the teaching and learning Social Studies.

Table 4.3: Knowledge on applications of ICT Tools in teaching and learning Social Studies

ICT Application	N	Min.	Max.	Mean	Std. Dvt
Prepare audio-video presentations for class activities using ICT	120	1.00	5.00	3.28	1.39
Use MS Excel to analyze data	120	1.00	5.00	3.32	1.38
Use MS Excel to create diagrams	120	1.00	5.00	3.34	1.38
Use MS Excel to register exams results	120	1.00	5.00	3.58	1.23
Use search engines to collect information for lesson preparation	120	1.00	5.00	3.19	1.43
Use email to communicate with colleague teachers	120	1.00	5.00	3.63	1.44
Use email to communicate with parents	120	1.00	5.00	3.38	1.41
Use social media platform like Facebook, etc.	120	1.00	5.00	2.72	1.29
Sending assignment and lecture notes through emails	120	1.00	5.00	3.60	1.24
Use MS word for typing notes	120	1.00	5.00	2.72	1.31
Assemble computer printer	120	1.00	5.00	3.51	1.34
Assemble computer scanner	120	1.00	5.00	3.57	1.20
Assemble computer modem	120	1.00	5.00	3.54	1.21

Source: Field Survey (2018)

The results in Table 4.3 showed the respondents‟ knowledge on both the application of Software and hardware ICT devices. With the software applications, the results showed that respondents agreed that they were familiar with some software applications such as using MS Excel to register exams results (Mean=3.58, Std. Dev.=1.23), sending assignment and lecture notes through emails (Mean =3.60, Std.

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Dev.=1.23), using MS word for typing notes (Mean=3.62, Std. Dev.=1.24), use email to communicate with colleague teachers (Mean=3.63, Std. Dev.=1.44), and using MS word for typing questions (Mean=3.59, Std. Dev.=1.26). In the case of the hardware applications, they confirmed that they had knowledge in assembling computer scanner (Mean=3.57, Std. Dev. =1.19), assembling computer printer (Mean=3.5, Std. Dev.=1.34), and assembling computer modem (Mean = 5.53, Std. Dev. = 1.21). However, the respondents were neutral on the ICT applications such as: preparing audio-visual presentations for class activities using ICT (Mean= 3.28, Std. Dev.=1.39), using MS Excel to analyze data (Mean=3.32, Std. Dev.=1.38), using MS Excel to create diagrams (Mean=3.34, Std. Dev.=1.38). Also they were neutral on applications like using search engines to collect information for lesson preparation (Mean=3.19, Std Dev.=1.43) using email to communicate with parents (Mean=3.37, Std. Dev.=1.41) and using social media platform like Facebook (Mean=2.72, Std. Dev.=1.29).

From the results, it can be observed that the respondents have some level of knowledge on the applications of some basic ICT software and hardware which assist them in teaching and learning of Social Studies. Their knowledge and skills on the application of the ICTs in teaching should motivate them to integrate technology into their teaching and learning processes.

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Research Question 2

What perception do Social Studies tutors in the public Colleges of Education in Ghana have on the importance of integrating ICT in teaching and learning?

The second research question investigated the perception of the Social Studies tutors on the importance of integrating ICT into the teaching and learning of Social Studies in the public Colleges of Education in Ghana, and the results are presented in Table 4.4.

When the mean score is within the range of 5.0 to 3.4, it was interpreted that the Social Studies tutors in the public Colleges of Education in Ghana considered the use of ICT in teaching and learning Social Studies as important. When the mean score is between 3.3 to 2.5, it was interpreted that the respondents were neutral in their perception in relation to the importance of ICT in teaching and learning Social Studies in the public Colleges of Education, and when the mean score is less than 2.5, it was considered that the respondents perceived the application of ICT in the teaching and learning Social Studies as not important.

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Table 4.4: Importance of ICTs in Teaching and Learning Social Studies

Importance	Min	Max	Mean	Std. Dev.
ICT helps students as it draws their attention to class	1.00	5.00	4.03	0.74
ICT generates genuine interest in students	1.00	44.00	4.56	0.74
ICT usage makes it easier to prepare course materials	1.00	5.00	4.07	0.90
With ICT I can use variety of media and formats to deliver information to students without face-face interactions	1.00	5.00	3.95	0.93
CT captures students attention	1.00	5.00	3.95	1.04
ICT caters for different types of learners especially introverted students	1.00	5.00	3.84	0.86
With ICT maximum task is accomplished in minimum time and effort	1.00	5.00	3.93	0.84
ICT use in teaching and learning is essential to prepare students to live and work in the 21st Century	1.00	5.00	3.66	1.07
ICT ensures uniformity of standards of Social Studies learning in the Colleges of Education	1.00	5.00	3.71	1.18
ICT makes the study of Social Studies to be student centered and activity based	1.00	5.00	3.93	0.90
Geographical location will no longer be a barrier to the study of Social Studies	1.00	5.00	4.08	0.81
The relationship between theory and practice is strengthened	1.00	5.00	4.03	0.88
ICT arouses the interest of students	1.00	5.00	3.88	0.87
ICT helps students to remember what they are taught easily	1.00	5.0	1.96	1.12
ICT enhances understanding of students	1.00	2.00	1.83	0.37

Source: Field Survey, 2018

Results from Table 4.4 showed respondents‟ perceptions on the importance of the integration of ICTs into teaching and learning of Social Studies in the public Colleges of Education. The findings indicated that respondents perceived that ICT helps to

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draw weaker students‟ attention to class (Mean =4.03, Std. Dev. =0.74), generates genuine interest in students (Mean = 4.07, Std. Dev.=0.90), ICT usage makes it easier to prepare course materials (Mean =4.06, Std. Dev.=0.89), enhances teaching and learning without face-face interactions (Mean =3.95, Std. Dev.=0.92), and the relationship between theory and practice is strengthened (Mean =4.03, Std. Dev. =0.87).

Again, they agreed that some importance of using ICT include maximum task being accomplished in minimum time and effort (Mean = 3.93, Std. Dev. =0.83), ICT use is essential to prepare students to live and work in the 21st Century (Mean =3.65, Std. Dev. =1.06), and ICT makes the study of Social Studies to be student centered and activity based (Mean = 3.92, Std. Dev. = 0.89). The use of ICT devices attracts the interest of the learners in class especially when audio-visual projections are used. When students are taught through the audio-visual means, students are always happy to be part of the class and enjoy what they are taught. In this case, the genuine interest of the students and their participations increase. In this scenario, learning becomes effective when students have the chance to see the real object being taught rather than learning in abstraction. During interactions in class, tutors who create videos and pictures of the aspects being delivered to students help to strengthen their understanding of the real concepts and produces a greater reflections. The findings support that of Rogers and Finlayson (2003) who suggested that ICT can help improve students‟ performance on tests and academic work, advance higher-order thinking skills, and boost students‟ motivation and self-concepts.

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Preparation of course materials becomes easier especially the advent of e-libraries, internet and other softcopies of teaching resources. Within minimum time, the tutors can organize necessary materials for their students. The traditional face to face teaching and learning have been criticized severally as the students find it time consuming and restrict learning across different geographical locations. That apart, the use of ICTs improves on the tradition of face-face classroom confinement approach to teaching and learning. With the use of ICT students can take course online from other location they may not be able to travel to. These findings confirm the assertion that the traditional classroom methods alone does not make learners more literate in the international level and prevents their active participation especially in the global push for the adoption of information and communications technology in this technological world (Schutt and Linegar, 2013).

Interestingly, studies such as Schutt and Linegar (2013) opine that application of ICT should be integral part of teaching pedagogy in this information age to complement the traditional face-to-face classroom methods of teaching and learning. Using ICT in teaching and learning involves electronic devices that deviate from the traditional classroom face-to-face teaching and learning which make it possible for learners to flexibly use the internet, digital platforms, satellite broadcast, electronic media especially through emails, portals, social media, blogs, e-books, among others.

The responses revealed that in this computer age, the use of ICTs has become necessary for everyone to be abreast with. In this case, students and teachers must have the opportunity to be educated on this technology in this era of globalization and civilization (Teo, 2008). The results support some previous findings that, the integration of ICT into teaching pedagogies helps learners to gain requisite skills to

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join the workforce, and to fully contribute their quotas to this technologically-driven world (Watson, 2001). It is expected that the introduction of ICTs into the educational system would improve the teaching and learning process and also enhance both the teachers and learners‟ abilities to use and apply technology in their world of work (Afari-Kumah & Tanye, 2009).

Research Question 3

What challenges are faced by Social Studies tutors in integrating ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana?

The aim of the third research question was to examine the challenges that Social Studies tutors face in the teaching and learning of Social Studies in the public Colleges of Education in Ghana, and the results are presented in Table 4.5. The challenges were interpreted as great when the mean score is within the range of 5.0 to 3.4, When the mean score is between 3.3 to 2.5, it was interpreted that the respondents were neutral in their perception with regards the challenges that confront Social Studies tutors in the public Colleges of Education, and when the mean score is less than 2.5, it was considered that the respondents perceived the challenges in the application of ICT in the teaching and learning Social Studies as less.

Results from Table 4.5 showed that several challenges confront the use of ICT in teaching and learning Social Studies in the public Colleges of Education in Ghana. The findings indicated that respondents agreed that factors such as ICT tools not available in sufficient quantity to use in colleges, so they are only used for teaching ICT course (mean =3.908, Std. Dev.=0.879), lack of pedagogical models on how to use ICT for teaching learning (Mean=3.767, Std. Dev.=0.914), insufficient ICT

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during pre-service training (Mean =3.40, Std. Dev.=1.088) were the major influential challenges that bedevilled the use of ICT in the public Colleges of Education.

Table: 4.5 Challenges of Using ICT

Challenges	N	Min.	Max.	Mean	Std. Dvt.
Inadequate skills to use ICT	120	1.00	5.00	2.11	1.04
Lack of in-service training on how to use ICT to teach	120	1.00	5.00	1.93	.85
Using ICT in class wastes lesson time	120	1.00	5.00	2.10	.97
Using ICT is not necessary for teaching	120	1.00	5.00	2.25	1.05
Using ICT decreases the interaction between my students and I	120	1.00	5.00	2.58	1.26
Class management is difficult when using ICT in class	120	1.00	5.00	2.82	1.26
Large class limits use of ICT	120	1.00	5.00	2.32	1.17
Internet speed is unsuitable for classroom use	120	1.00	5.00	2.79	1.11
Social Studies curriculum is not designed for ICT application	120	1.00	5.00	3.27	1.26
There is no coherent plan to integrate ICT into teaching in the College	120	1.00	5.00	2.95	1.22
Insufficient ICT during pre-service training	120	1.00	5.00	3.70	1.09
ICT equipment may fail during class	120	1.00	5.00	3.01	1.18
Insufficient technical support for ICT use in the school	120	1.00	5.00	3.28	1.34
Insufficient space to use ICT in classroom	120	1.00	5.00	2.50	1.15
Internet is not available in the school	120	1.00	5.00	2.41	1.11
Can be a source of distraction	120	1.00	5.00	2.63	1.17
Can be unnerving and puts teacher out of comfort zone	120	1.00	5.00	3.20	1.13
Loss of class time due t set up or technical problems	120	1.00	5.00	3.67	1.14
Lack of pedagogical models on how to use ICT for learning	120	1.00	5.00	3.77	.91
ICT tools not available in sufficient quantity to use in school so they are only used for teaching ICT course	120	1.00	5.00	3.91	.88

Source: Field Survey, 2018

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They however disagreed that factors such as inadequate skills to use ICT (Mean=2.10, Std. Dev. = 0.97), lack of in-service training on how to use ICT to teach (Mean=1.93, Std. Dev. =0.85), using ICT in class wastes lesson time (Mean=2.1, Std. Dev.= 0.96), using ICT is not necessary for teaching (Mean=2.25, Std. Dev. = 1.04), large class limits the use of ICT (Mean=2.31, Std. Dev. =1.16), and internet is not available in the school (Mean=2.40, Std. Dev. = 1.11) are some challenges that should limit the integration of ICT into teaching and learning of Social Studies in the public Colleges of Education.

While the respondents were neutral on such challenges as insufficient technical support for ICT use in the school (Mean = 3.28, Std. Dev = 1.34), insufficient technical support for ICT use in the school (Mean= 3.28, Std. Dev. =1.34), „Social Studies curriculum is not designed for ICT application (Mean=3.28, Std. Dev.=1.26), and there is no coherent plan to integrate ICT into teaching in the College (Mean=2.90, Std. Dev.=1.22). Also, apart from the ICT course itself, all other causes are not designed with pedagogical models suitable for the use of ICT in teaching. In effect, it is only the tutors who can search for little information online to add to the course module and content use ICT. The traditional face to face method is solely recommended, the use of Skype, chat, or e-conference is not allowed. Keeping lecture notes online for students to download is also not permitted by the kind of educational system and curriculum requirement. The curriculum requirement does not make room for any training on how to use ICT for teaching in class or through e-conferencing.

Again, the study revealed that tutors did not receive sufficient pre-service training on the use of ICT to teach in other courses that are not computer based. In this case, using the ICT to teach after the pre-service training becomes a challenge. Besides, the

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serious issue is that because they are not trained on how to use ICT to deliver in class, probably apart from the use of projector, they are afraid to try them in class because if they fail in the presence of the students, they will be embarrassed. Therefore, to avoid this embarrassment, they decide to use traditional approach to teach. These findings confirm that of Teye (2012) who concluded that some of the factors that were found to have influence on teachers" motivation and confidence in using ICT for teaching included lack of knowledge about computers, fear of using computers, lack of training and insufficient time to use computers to plan lessons.

More importantly, the unavailability of technical support in the colleges also does not motivate the tutors to use ICT to teach. Because dealing with the new technology is not an easy task, when it fails and there is nobody to assist the tutor in class, it will distract the class. So to avoid this disturbance, the traditional approach is usually employed to teach. The findings support some previous studies with similar results. Osei et al. (2014), and Newhouse (2002) uncovered that many teachers without skills and knowledge were not enthusiastic about the integration of ICT in their teaching activities and that made it difficult for them to adopt it. They also added that teachers with no experience with computer did not even try to work with it because they felt they could look like idiots and more stressed.

The classroom used for lectures are not spacious enough to employ some ICT devices like computers for the students. In this case, the teacher can only use one computer while the students follow, which does not encourage the students to engage themselves in the lesson. Internet facilities are also not available so it demotivated the use of ICT in the teaching and learning. Since most tutors do not have adequate skills in the use of ICT for teaching and learning, the use is limited. These findings support

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Gomes (2005) who discovered that technical support is one of the main problems that affect integration of ICT among the teachers. Some examples which are classified as technical challenges include internet connection failure, malfunctioning computers, and waiting for websites to open. Gomes (2005) in the end recommended that schools should employ technicians to rapidly check on the computer facilities and operations to reduce the challenges that teachers face in using ICT.

Research Question 4

What are the perceptions of tutors on the measures that could be put in place to enhance the integration of ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana?

The fourth research sought to gather the views of Social Studies tutors on measures that could be put in place to enhance the integration of ICT into the teaching and learning of Social Studies in the public Colleges of Education in Ghana. The results are shown in Table 4.6.

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Table 4.6: Measures to Enhance the Integration of ICTs into Teaching and Learning of Social Studies

Measures	N	Min.	Max	Mean	Std. Dev.
1. Orientation on how to use specific technology for teaching and learning	120	1.00	5.00	4.08	0.94
2. Pre-service and in-service training on basic skills on ICT and internet use	120	1.00	5.00	3.87	1.29
3. Support from management and colleagues	120	1.00	5.00	3.88	1.06
4. Provision of computer for tutors	120	1.00	5.00	4.28	0.99
5. Flexible timetabling to encourage ICT use in classroom	120	1.00	5.00	4.25	1.00
6. Provision of reliable internet facilities in the colleges	120	1.00	5.00	4.07	1.13
7. Provision of stable power supply sources in the colleges	120	1.00	5.00	4.05	1.04
8. Provisions of enough projectors	120	1.00	5.00	3.95	0.88
9. Ministry of education should enforce the policy of integrating ICT into teaching subjects like Social Studies	120	1.00	5.00	4.06	1.07
10. Social Studies curriculum should be designed to suit the application of ICT	120	1.00	5.00	3.95	1.04
11. Enough space should be provided for ICT use in class	120	1.00	5.00	4.12	.95
12. Teacher trainees should be given ICT tools so that they can access information that their tutors would send to them	120	1.00	5.00	4.08	.95

Source: Field Survey (2018)

Results from Table 4.6 showed that respondents agreed that measures such as orientation on how to use specific technology for teaching and learning (Mean = 4.08, Std. Dev.=0.94), provision of computers for tutors (Mean=4.28, Std. Dev.= 0.98), flexible timetabling to encourage ICT use in classroom (Mean=4.25, Std. Dev.=1.00), provision of reliable internet facilities in the colleges (Mean=4.06, Std. Dev.=1.12), provision of stable power supply sources in the colleges (Mean=4.05, Std. Dev.=1.04) would improve the integration of ICT into teaching and learning of Social Studies. The respondents agreed that the Ministry of Education should enforce the policy of integrating ICT into teaching subjects like Social Studies (Mean = 4.05, Std.

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Dev.=1.07), Social Studies curriculum should be designed to suit the application of ICT (Mean = 3.95, Std. Dev.=1.04), enough space should be provided for ICT use in class (Mean =4.11, Std. Dev.= 0.95), and student teacher trainees should be given ICT tools so that they can access information that their tutors would send to them (Mean = 4.07, Std. Dev.= 0.95).

They believed that these measures would help enhance the integration of ICT into teaching and learning of Social Studies in the public Colleges of Education in Ghana. Providing orientation for the tutors will create the awareness and draw their attention towards the importance of the use of the ICTs to enhance teaching and learning of Social Studies. Also, the in-service training will help them develop new skills and competence so that they become more self-confident to employ the technologies. They should be equipped with more skills through the orientation, in-service training. As Newhouse (2002) noted, many teachers without skills and knowledge in the use of ICTs were not enthusiastic about the integration of ICT in their teaching activities. Some of the tutors even decide not to attempt because they simply lack the skills, therefore they needed to be equipped.

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) (2008) showed that the involvement of new technologies in curriculum delivery has both direct and indirect influence on the teaching and learning process as well as on social and economic development. Using ICTs in classroom setting will require setting up gadgets and other accessories which require enough time. It is in this direction that during the timetabling, all these factors should be considered if successful integration of ICTs into the teaching and learning of Social Studies is to be achieved.

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4.4 Test of Hypotheses

Hypothesis 1

H_{01}: There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different sex and their integration of ICT in teaching Social Studies.

To provide answers to this hypothesis, the influence of sex on the use of ICT in the teaching and learning of Social Studies was investigated. The t-test was used to compare the mean difference between sex and the use of ICT for teaching and learning Social Studies in the colleges, and the results are presented in Table 4.7.

Table: 4.7 T-test Results for Sex of Respondents and their Use of ICT

Dependent Variable	Sex	Mean	Std. Dev.	t	df	P-value
Use of ICT in teaching and learning of Social Studies	Male	1.38	0.49	31.04	118	0.001
	Female	1.52	0.50			

Source: Field Survey (2018); p-value is significant at 0.05

Results from the Table 4.7 showed that there is significant difference between male (M=1.38, SD = 0.49) and female (M =1.52, SD = 0.50) tutors in their use of ICTs for teaching and learning Social Studies in the public Colleges of Education in Ghana [t (118) = 31.04, $p<0.05$]. The results implied the sex of the respondents influenced the use of ICT in teaching and learning Social Studies where the female tutors used ICT in the teaching and learning of Social Studies more than their male counterparts. Based on this result, the null hypothesis that „There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different years of teaching experience and their integration of ICT in teaching Social Studies" was rejected while the alternative hypothesis was accepted.

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This finding disagreed the results of previous studies where significant differences between male and female tutors on the integration of ICTs. For example, Omollo, Indoshi and Ayere (2013) showed that males had slightly more positive attitude toward ICT use than females. Gode, Obegi and Macharia (2014) also concluded that male teachers had favourable attitude towards use of computers than female teachers. Female tutors have been identified to have negative perception about the use of ICTS, and feel uncomfortable in their use in teaching activities and this hinders the implementation of ICTs in the educational curriculum (Birgit, 2011). It could be inferred that male tutors on the other hand, fell more comfortable and usually apply the ICT devices in the teaching and learning processes.

Hypothesis 2

H_{02}: There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different academic qualification and their integration of ICT in teaching Social Studies.

The study examined the influence of academic qualification on the use of ICTs among the Social Studies tutors. The analysis of variance (ANOVA) was employed for the analysis, and Table 4.8 presents the results from the analysis.

Table 4.8: ANOVA Results for Academic Qualification and Use of ICT

Dependent Variable	Academic Qualification	Mean	Std. Dev.	F	Sig.
Use of ICT in teaching and learning of Social Studies	First Degree	1.15	0.82	0.56	0.46
	MED	1.20	0.28		
	MPHIL	1.30	0.48		
	Total	1.20	0.64		

Source: Field Survey (2018); p value is significant at 0.05

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The findings from the Table 4.8 indicated that there were no significant differences between the level of academic qualification and the use of ICTs among the respondents [F (2, 117) = 0.56, p>0.05]. This implies that the use of ICTs in teaching does not depend on the level of academic qualification among the Social Studies tutors. Therefore, the null hypothesis that „There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different academic qualification and their integration of ICT in teaching Social Studies" was accepted while the alternative hypothesis was rejected. This result does not support previous assertions that academic qualification influences the use of ICT for teaching and learning Social Studies. According to Becker (2000), the higher the level of academic qualification, the more tutors use ICT in teaching Social Studies, and Roblyer, Edwards and Havriluk (2004) further added that tutors need more skills training and improvement in the level of academic qualification in order to enhance the integration of ICT into teaching and learning processes.

Hypothesis 3

H_{03}: There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different age and their integration of ICT in teaching Social Studies.

The study examined the difference between age of respondents and their use of ICT in teaching and learning Social Studies in the public Colleges of Educations in Ghana. ANOVA was used to provide answers to the study, and the result is presented in Table 4.9.

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The findings from Table 4.9 revealed that there is no significant deference in terms of the use of ICTs in teaching and learning Social Studies in the public Colleges of Education [F (3, 116) = 1.12, p>0.05] due to age. The implication is that, for tutors to integrate ICTs into their teaching pedagogies, it does not depend on whether old or young.

Table: 4.9 ANOVA Results for age and use of ICT

Dependent Variable	Age	Mean	Std. Dev.	F	Sig.
Use of ICT in teaching and	Below 31	1.18	0.33	1.12	0.35
learning of Social Studies	31-40	1.21	0.64		
	41-50	1.19	0.45		
	51-60	1.20	0.14		
	Total	1.20	0.49		

Source: Field Survey (2018); p-value is significant at 0.05

Hence, the null hypothesis that „There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different age and their integration of ICT in teaching Social Studies" was accepted while the alternative hypothesis was rejected. These findings contradict the results of previous studies as Osei et al. (2014) found that age is a key factor influencing the use of ICTs in teaching Social Studies among tutors in Ghana. Similarly, Chemwei et al. (2014) confirmed that teachers in the age bracket of 41-50 years and above in the teaching profession had challenges using computers even though this study found otherwise.

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Hypothesis 4

H_{04}: There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different years of teaching experience and their integration of ICT in teaching Social Studies.

The influence of teaching experience on the use of ICTs in the teaching and learning Social Studies was explored using ANOVA, and the findings are presented in Table 4.10.

Table: 4.10 ANOVA for Teaching Experience and Use of ICT

Dependent Variable	Experience	Mean	Std. Dev.	F	Sig.
Use of ICT in teaching and learning of Social Studies	1-5	1.35	0.71	2.85	0.01
	6-10	1.19	0.49		
	11-15	1.20	0.55		
	16-20	1.21	0.31		
	Above 20	1.20	0.36		
	Total	1.23	0.42		

Source: Field Survey (2018)

The results in the Table 4.10 revealed that there is a significant difference between the use of ICTs among the Social Studies tutors [$F(4, 115) = 2.85$, $p<0.05$] based on their teaching experience. The results showed that teaching experience influenced the use of ICT among the tutors in the public Colleges of Education. Therefore, the null hypothesis that „There is no statistically significant difference between Social Studies tutors in the public Colleges of Education in Ghana with different teaching experience and their integration of ICT in teaching Social Studies" was rejected while the alternative hypothesis was accepted. As Chemwei, Njagi and Koech (2014) found, experience of teachers has a substantial influence on adoption and use of technology in daily classroom activities.

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Deen-Swarray, Gillwald and Morrell (2012) also supported these previous findings and stressed that teachers with extensive teaching experience were aged and therefore had a low self-efficacy in access and ease of use of ICT tools in classroom activities. This is to say that the period of time in which the teacher started or served in teaching influences the adoption and use of ICT in teaching and learning Social Studies. Mulwa and Kimosop (2015) concluded that teachers who served in the teaching profession for long period have no interest in ICT and this greatly influences the integration of ICT into teaching and learning activities.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter of the study is allocated to the summary, conclusion, and recommendations. The chapter is organized into four sections. The first part discusses the summary which highlights the purpose of the study and the processes involved in carrying out the study. The second part presents the key findings of the study. The third part involves the conclusions drawn from the study, and finally, the recommendations of the study are presented based on the key findings.

5.1 Summary of the Study

The purpose of this study was to examine the perception of Social Studies tutors in the public Colleges of Education in Ghana on the integration of ICTs into teaching and learning of Social Studies. Specifically, the study sought to:

1. investigate how familiar Social Studies tutors are with the integration of ICT in teaching and learning of Social Studies in the public Colleges of Education in Ghana.
2. examine tutors‟ perception on the importance of integrating ICT in teaching and learning Social Studies in the public Colleges of Education in Ghana.
3. investigate the challenges faced by Social Studies tutors in integrating ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana.
4. examine the perception of tutors on the measures that could be put in place to enhance the integration of ICT in the teaching and learning of Social Studies in the public Colleges of Education in Ghana.

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5. examine the influence of demographic factors of Social Studies tutors on their use of ICTs in teaching Social Studies on the public Colleges of Education in Ghana.

The study employed descriptive statistics to analyze the results obtained from 120 Social Studies tutors randomly selected from public Colleges of Education in Ghana.

5.2 Major Findings of the Study

The major findings of the study include the following:

1. From the results, it can be observed that the respondents have some level of knowledge on the applications of some basic ICT software and hardware which assist them in teaching and learning of Social Studies. Their knowledge and skills on the application of the ICTs in teaching should motivate them to integrate technology into their teaching and learning processes.
2. The findings disclosed that the Social Studies perceived the integration of ICT into the teaching and learning of Social Studies as important.
3. The study revealed that major challenges in the integration of ICT into the teaching of Social Studies include insufficient ICT tools, lack of pedagogical models on how to use ICT for teaching learning Social Studies, and inadequate ICT training during pre-service training.
4. It was further shown in this study that orientation on how to use specific technology for teaching and learning Social Studies, provision of computers for tutors, flexible timetabling to encourage ICT use in classroom, provision of reliable internet facilities in the colleges, and provision of stable power supply sources in the colleges were measures that could be put in place to improve on

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the integration of ICT into teaching and learning of Social Studies in the public Colleges of Education in Ghana.

5.3 Conclusions

The study had demonstrated that even though the respondents were aware of the importance of integrating ICT into the teaching and learning of Social Studies in the public Colleges of Education, it was shown that the tutors had limited access to the use of ICT in the teaching and learning Social Studies. According to the respondents, the importance of using ICT in the teaching and learning Social Studies include it helps to draw weaker students‟ attention to class, generates genuine interest in students, makes it easier to prepare course materials, and to prepare students to live and work in the 21st Century. The limited access to ICT implies that Social Studies tutors would not be able to integrate ICT into the teaching and learning of the subject.

The study further disclosed that the challenges that confront the use of ICT in the teaching of Social Studies include insufficient ICT tools, and lack of pedagogical models on how to use ICT for teaching learning Social Studies. The respondents therefore suggested measures that could be adopted to enhance the integration of ICTs into teaching and learning activities of Social Studies. These include the orientation on how to use specific technology for teaching and learning for tutors, provision of computers for tutors, flexible timetabling to encourage ICT use in classroom, provision of reliable internet facilities in the colleges, provision of stable power supply sources in the colleges, and enough space should be provided for ICT use in class.

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In essence, respondents have shown commitment and readiness to integrate ICT into teaching and learning of Social Studies. It is interesting to note that teaching experience and sex of respondents were significant factors that influenced the integration of ICTs into teaching and learning activities in the public Colleges of Educations in Ghana. This suggests that teaching experience and the sex of tutors need to be considered in decisions regarding the integration of ICT into the teaching and learning of Social Studies in the public Colleges of Education in Ghana.

5.4 Recommendations

Based on the major findings of the study, it was recommended that:

i. The management of the public Colleges of Education in Ghana should provide regular in-service training on ICT use in teaching and learning Social Studies so as to update the tutors to effectively integrate ICT into the teaching and learning of the subject.

ii. National Council for Tertiary Education (NTCE) in Ghana should enforce a policy of integrating ICT into the teaching and learning of Social Studies due to its advantages to both the learners and the tutors at the public Colleges of Education in Ghana. This can be achieved where the Social Studies curriculum is designed to suit the application of ICT so that tutors can apply them in the teaching and learning of Social Studies.

iii. The management of the public Colleges of Education in Ghana should seek sponsorship from internet service providers in Ghana to provide free or affordable and reliable internet connectivity in the colleges to facilitate effective use of ICTs in the teaching and learning of Social Studies in the colleges, also, appropriate pedagogical models suitable for the integration of ICTs into Social Studies teaching and learning should be developed by

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curriculum designers to assist tutors in their urge to employ them in teaching the subject.

iv. The management of the public Colleges of Education and National Council for Tertiary Education (NTCE) in Ghana should provide orientation, in-service training, ICT tools and reliable internet for the tutors to enhance the integration of ICT into teaching and learning of Social Studies in the public Colleges of Education in Ghana.

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APPENDICES

APPENDIX A

QUESTIONNAIRE

Dear Sir/Madam,

The researcher is conducting a study on the integration of ICT into teaching and learning of Social Studies among colleges of education in Ghana as part of the requirement of the master of philosophy degree from the above university. You have been selected to be part of the study. Please kindly give your candid opinion and you are assured that the information given will be treated as confidential and used for purely academic purposes.

Thank you for your cooperation.

(Instruction: please, kindly tick (√) where applicable)

SECTION I: SOCIO-DEMOGRAPHIC INFORMATION OF RESPONDENTS

1. Sex :

a) Male ( ) b) Female ( )

2. What is your Age in years?

a) Below 31 ( ) b) 31-40 ( ) c) 41-50 ( ) d) 51- 60 ( ) e) 60+ ( )

3. Highest educational qualification:

a) First degree ( ) b) master"s degree ( ) c) doctorate degree ( )

4. For how long have you been teaching in the college of education?

……

5. Marital status:

a) Single ( ) b) Married ( ) c) Widow () d) Divorced ( ) e) Separated ( )

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SECTION II

KNOWLEDGE, SKILLS AWARENESS AND EXPERIENCE (FAMILIARITY) WITH INTEGRATING ICT INTO TEACHING AMONG SOCIAL STUDIES TUTORS

Please tick ONLY ONE option

As a Social Studies tutor, I have access to the following ICT tools:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Laptop Computers					
Projectors					
Personal Computers					
Palmtop Computers					
Desktop Computers					
IPAD					
Internet connectivity					

Please choose ONLY ONE option

As a Social Studies tutor, I am able to:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1. Prepare audio-video presentations for class activities using the ICT devices					
2. Use software programs such as MS Excel to analyze data and create diagrams, register exams results,					
3. Use search engines to collect Social Studies information for lesson preparation					
4. Use emails to communicate with colleague teachers, students, and parents					
5. Use social media platform such as Facebook, twitter, instagram, whatsaap					
6. Sending assignment and lecture notes to students through their					

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emails					
7. Use MS word for typing notes, questions, and creating folders to save your files					
8. Assembling of computer accessories such as printer, cameras, scanners, modem etc.					
9. Experience in Video lecture or e-conference					
10. Use projector and PowerPoint for classroom delivery					

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SECTION III

ATTITUDE TOWARDS THE CHALLENGES OF INTEGRATING ICT INTO TEACHING AND LEARNING OF SOCIAL STUDIES

Please, indicate candidly the challenges influencing the integration of ICT into teaching and learning of Social Studies.

Challenges	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Inadequate skills to use ICT					
2. Lack of in-service training on how to use ICT to teach Social Studies					
3. Using ICT in class wastes lesson time					
4. Using ICT is not necessary for teaching Social Studies					
5. Using ICT decreases the interaction between me and the Students.					
6. Class management is difficult with ICT					
7. Large classes limit use of ICT					
8. Internet speed is unsuitable for classroom use					
9. Social Studies curriculum is not designed for ICT applications					
10. There is no coherent plan to integrate ICT in the School					
11. Insufficient ICT pre-service training					
12. ICT equipment may fail during class					
13. Insufficient technical support for ICT in the school					
14. Insufficient space to use ICT in classes					
15. Internet is not available in the school					
16. Can be a source of distraction					
17. Can be unnerving; puts teacher out of comfort zone					
18. Loss of class time due to set up or technical problems time to prepare lesson using ICT					
19. Lack of pedagogical models on how to use ICT for learning					
20. ICT tools not available in sufficient quantity to use in school so they are only used for teaching ICT course					

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SECTION IV
ATTITUDE TOWARDS THE IMPORTANCE OF INTEGRATING ICT INTO TEACHING AND LEARNING OF SOCIAL SRUDIES

Indicate the benefits of integrating ICT into teaching and learning o the Social Studies.

Importance of using ICT teaching Social Studies	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Helps weaker students as it draws them into class					
2. Generates genuine interest in the subject					
3. ICT usage makes it easier to prepare course materials.					
4. Using the Internet to collect learning material or resources to be used by teachers					
5. Can use a variety of media and formats, to deliver information to students without face-to-face interaction					
6. Captures students attention					
7. Caters for different types of learners especially introverted students(lacking in confidence)					
8. With ICT maximum task is accomplished in minimum time and effort					
9. Use ICT to provide feedback and/or assess students learning needs more training					
10. ICT improves the class climate					
11. ICT use in teaching and learning is essential to prepare students to live and work in the 21st century.					
12. It is applicable in the teaching of few topics or aspects of Social Studies					
13. ICT ensures uniformity of standards of Social Studies learner in the colleges of education					
14. ICT makes the study of Social Studies to be student-centred and activity based					
15. Geographical location will no longer be a barrier to the study of Social Studies					
16. The relationship between theory and practice is strengthened					
17. ICT arouses the interest of students					
18. It helps students to remember what they are taught easily					
19. ICT enhances understanding of students					
20. Using ICT to teach Social Studies will only help tutors not students					

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SECTION V

MEASURES TO PUT IN PLACE TO ENHANCE THE INTEGRATION OF ICT INTO TEACHING AND LEARNNG OF SOCIAL STUDIES

What measure should be put in place to enhance the integration of ICT in teaching Social Studies?

Measures	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Orientation on how to use specific technology for Teaching and learning					
2. In-service training on basic skills ICT and internet use					
3. Support from management and colleagues					
4. Provision of computers for tutors					
5. Flexible timetabling to encourage ICT use in classroom					
6. Provision of reliable internet facilities in the school					
7. Provision of stable power supply sources in the school					
8. Provision of enough projectors for tutors					
9. Social Studies curriculum should be designed to suit the application of ICT					
10. Enough space should be provided for ICT use in class					
11. Students should be given ICT tools such as iPad, laptop, modem so that they can access information tutor would send to them					
12. Ministry of Education should enforce the policy of integrating ICT into teaching subjects like Social Studies					

Thank you

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APPENDIX B

LETTER OF INTRODUCTION

UNIVERSITY OF EDUCATION, WINNEBA
FACULTY OF EDUCATIONAL STUDIES
DEPARTMENT OF BASIC EDUCATION

Date: December 5, 2017

The Principal

..... College of Education

Dear Sir/Madam,

LETTER OF INTRODUCTION

I write to introduce to you, Ms. Elizabeth Adoma Sefah, a second year M.Phil student of the Department of Basic Education, University of Education, Winneba, with registration number 8160030005.

Ms. Elizabeth Adoma Sefah is to carry out a research on the Topic *"Perception of Social Studies Tutors towards the Integration of ICT in Teaching and Learning in some Selected Colleges of Education in Ghana"*.

I would be grateful if permission is granted her to enable her carry out the studies in your Institution.

Thank you.

MR. KWEKU ESIA-DONKOH
(Ag. Head of Department)