International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 8 Issue 4, Jul-Aug 2024 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

Assessing the Impact of Information Communication Technology (ICT) in the Teaching and Learning of Social Studies in Senior High Schools in Ghana: A Case of Eastern Region Schools

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ABSTRACT

Information and communication technology (ICT) is one of the most important driving forces promoting economic growth in the economy. However, there is less of a consensus among economists on whether the impact of ICT also stems from higher total factor productivity (TFP) growth and improved efficiency of production (due to a better educated population). Integrating ICT into educational curriculum has been discussed for the past decades.

This study investigated the impact of ICT integration in teaching and learning social studies in public second-cycle institutions in the Eastern region of Ghana. the study was guided by four objectives; examine the impact ICT integration has on students' and teachers' motivation towards social studies; find out the effect of ICT usage on social studies teaching and learning effectiveness; examine the extend motivation influence ICT usage in social studies teaching and learning; find out the factors that hinders ICT integration in the teaching and learning of Social studies. The study adopted mixed method approach where both qualitative and quantitative data was collected. Using simple random technique, the research sampled teachers and students from accessible schools as respondents for the study. Data was generated using descriptive and analytical statistic. Data obtained from this study was presented in form of charts, graphs and tables through the use of Statistical Package for Social Science (SPSS) version 25.0, and Microsoft office excel 2010. The charts, graphs and tables were explained based on information gathered. The research analysis was staged using univriate and multivariate, normality test, exploratory analysis, confirmatory analysis, reliability test, correlation and regression analysis. The findings from the study established that majority of teachers and students are more enthusiastic towards teaching and learning when ICT is involved. The study also found out that the frequent usage of ICT by teachers and students leads to a greater performance. Also, due to unavailability of ICT tools in most schools and lack of requisite ICT skills, teachers find it difficult to integrate ICT in their lessons. The recommendations from this study were that the government should provide ICT infrastructures and facilities for the SHSs to ensure effective integration of ICT in the teaching and learning process. Again, teachers should be giving the necessary training in ICT skills and knowledge to enable them integrates it in their lessons.

How to cite this paper: Amegah Edinam Emelia | Qian Xusheng "Assessing the Impact of Information Communication Technology (ICT) in the Teaching and Learning of Social Studies in Senior High Schools in Ghana: A Case of Eastern Region Schools" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-8 | Issue-4, August 2024, pp.868-892, URL: www.ijtsrd.com/papers/ijtsrd67245.pdf

IJTSRD67245

KEYWORDS: *ICT, Ghana, ICT integration, teaching and learning, Social studies*

INTRODUCTION

1. Overview

The integration of Information Communication Technology (ICT) into education has revolutionized teaching and learning globally, and its impact on Social studies in senior high schools in Ghana is significant, particularly in the Eastern region. ICT encompasses various tools and resources, such as

computers, internet, and software applications (ref), which facilitate interactive and engaging learning environments. This transformation is particularly relevant in Social studies, a subject that encompasses history, geography, economics, and civics, requiring diverse teaching methods to effectively impart knowledge and critical thinking skills. In Ghana, the adoption of ICT in education has been propelled by national policies and initiatives aimed at enhancing educational outcomes.

The mention of technology today communicates the idea of advancement, improvement and progress. There is a strong conflict growing within the education establishment. The catalysts driving the information age are conflicting with educators who are resisting change. The surge of telecommunication technologies is forcing educators to comprehend and conditionally accept these new technologies and their impacts. Realizing the effect of new technologies on the workplace and everyday life, educational institutions try to reorient their educational programs and classroom facilities, in order to minimize the teaching and learning technology gap between developed and developing countries. This restructuring requires effective integration of technologies into existing context in order to provide learners with knowledge of specific subject areas, to promote meaningful learning and to enhance professional productivity (Tomei, 2005).

ICT is a term used to describe types of technology that are used for communication purposes such as cell phones, the internet and wireless networks (Young, 2012). Also, ICT is defined by Turban et al as an organization‘s collection of information resources, their users, and management that oversees them; includes the IT infrastructure and all other information systems in the organization. Integration of information and communication technology (ICT) is on the high on the education reform agenda worldwide particularly in developed countries (Tilya, 2008).To fully participate in the information society, ICT has become a prerequisite tool for doing so (Peeraer&Van Petegem,2011). In recent times, ICTs have come to be considered as a tool creating opportunities for educational institutions and other organizations to equip and utilize technology to complement and support the teaching and learning process. Although a large body of research on factors determining the integration of ICT in education emerges from developed countries, developing countries are also finding ways in which they can participate effectively in the global information society and address challenges regarding ICT in education (Tilya, 2008).

ICTs are making dynamic changes in society. They are influencing all aspect of life. The influences are felt more and more at schools. Because ICTs provide both students and teachers with more opportunities in adapting learning and teaching to individual needs, society is, forcing schools to ably respond to this technical innovation. Tinio (2002), revealed that ICTs have the potential of making relevance improvement and access to education in developing countries. Tinio further states the potentials of ICTs as follows: ICTs greatly facilitate the acquisition and absorption of knowledge, offering developing countries unprecedented opportunities to enhance educational systems, improve policy formulation and execution.

To this extent, the Ministry of Education implemented a number of policy and program interventions with sole purpose of increasing access and equity and improving the quality of education. The integration of ICT in education is to facilitate effective teaching, learning and management through the provision of computer labs, internet and network connectivity to schools, supply of Laptops to teachers and students and capacity development of teachers (Education Reform, 2007).

Consequent to these efforts in educational transformation and reforms in Ghana, not until recently, wealth of scientific academic inquiries have investigated and evaluated the significance of the integration of ICT in teaching and learning process. As was identified by (Arnseth & Hatlevik, 2012), ICT integration in education is seen as key to the success of education because of its ability to provide dynamic and proactive teaching and learning environment. Thus, it improves lesson delivery, student involvement, provide rich information, and facilitate information and knowledge sharing among teachers and students towards the training and development of students to more productive adults for national development in 21st century (Oko & Uwatt, 2015)

Despite effort at the use of technology in the educational sector, the sector seems to be lagging behind when it comes to integrating technology into the teaching and learning process. The use of ICT in the second-cycle institutions is really below expectations mainly due to inadequate or lack of technological devices in the schools. However, the opposite can be said about the tertiary institutions since most universities and colleges are shifting from the tradition of depending on lecture notes and textbooks only, to online courses and e-resources (Afari-Kumah &Tanye, 2009). Efforts of policy makers in education to ensure the effective use of ICT in the classroom through various educational reforms and policies seems to be thwarted by government‘s minimal commitment to provide infrastructure for ICT

implementation (Amenyedzi etal, 2011).

Examining the senior high school closely inform one that beside the introduction of ICT has a subject, most teachers do not infuse it in their classroom instruction. Though the numerous subjects taught in our SHSs demand the infusion of technology in the teaching and learning process. Social studies as a core subject and very significant element in determining the overall grade a student obtain in the final exams (West African Senior School Certificate Examination (WASSCE) requires that teachers of the subject become creative in methodologies in order to rid the boredom in teaching some aspects related to the subject.

The teaching and learning of Social studies could be challenging as per the abstract nature. As a result of this, students may develop negative attitude towards the subject. Some students have the opinion that the subject is packed in content and dull while others view it as a rote memorization of facts and dates without any variation and modification in the way it supposed to be taught and learned. Shane (2008) admit to this opinion and argues 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 further adds that even as the mode of delivery may vary, but the essential constituent of the subject, remains comparatively steady regardless of where it is taught and the person who teaches it. Thus the subject is to be brought to life to further understanding and stimulate the interest of students in the subject. In order to realize this, there is the need to use relevant instructional resources to aid delivery.

The significant revelation of the role ICT plays in education by enhancing teacher's efficacy in promoting students engagement, instructional delivery and sustaining their interest and motivation which subsequently and always improve student performance, an investigation of the impact of ICT in the teaching and learning of social studies in public SHSs in Ghana is surely needed.

1.1. Objectives

To examine the impact of ICT in teaching and learning social studies;

1. To examine the impact ICT integration has on students' and teachers' motivation towards social studies.
2. To find out the effect of ICT usage on social studies teaching and learning effectiveness.
3. To examine the extend motivation influence ICT usage in social studies teaching and learning.
4. Find out the factors that hinders ICT integration in the teaching and learning of Social studies.

1.2. Research questions

1. How does ICT integration impact students' and teachers' motivation towards social studies teaching and learning?
2. What extent ICT usage influence social studies teaching and learning (effectiveness)?
3. How does motivation influence ICT usage in social studies teaching and learning?
4. What constitute the factors that hinders the effective use of ICTs in teaching and learning of Social studies?

1.3. Significance of the study

Primarily, the study finds out the influence of ICT in teaching and learning of social studies in SHS and its effectiveness and also the impact it has on teachers and students teaching and learning. This study adds new insights to assist social studies teachers to obtain a greater expertise on the use of ICT in teaching social studies. This is extremely important for both social studies teachers and other educational stakeholders, given the considerable interest and efforts to promote ICT utilization in education. The study also acts as evidence of how technology is changing the various channels of teacher-student interaction, student management and instructional strategies. Finally, the study acts or adds to literature in the area of the use of ICT in education through adoption and implementation of ICT in teaching social studies lessons and probably serves as reference point to other related studies and research conclusions, recommendations, suggestions and practical application of the study.

LITERATURE REVIEW

2. Overview

This chapter of this study review related literature on the learner motivation, theories on the role of motivation in learning; concept of ICT; history of ICT integration in Ghana Education establishment; the ICT and motivation; ICT in Social studies; effectiveness of ICT in teaching and learning and challenges of ICT integration in classroom instruction.

2.1. Theoretical perspective

2.1.1. Learner motivation

Motivation is what energizes human behaviour, directs or channels such behaviour and how such behaviour is maintained or sustained (Steers, R.M., &Porter, 1991). Harmer (2001) defines motivation as some kind of internal drive which pushes someone to do things in order to achieve something. Motivation is the reason that underlies behaviour characterized by willingness and volition (Lai, 2011), understandably, motivation is thought to be responsible for why people decide to do something, how long they are willing to

sustain the activity and how hard they are going to pursue it(Domyei& Clement,2001).

In the learning context, motivation to learn, according to Kim &W.Frick, (2011), is an important phenomenon in educational psychology as they described it to be the main principle for efficient education. This view has gained heightened interests and support and eventually led to definitions and concepts which define motivation in learning. According to (Brophy, 1983, p.200), learning motivation is ―the enduring disposition of students to enjoy the process of learning and take pride in the outcomes of experience involving knowledge acquisition or skill development. Learning motivation is thought to exert positive influence on learning behaviour and achievement by encouraging learners to continue learning and strengthening their interest in the subject content so as to achieve their study objectives (Mitchell, 1992; Pajares, 2001, 2002). Also, Garavan's et al, (2010) thoughts cannot be pushed to the background of the discourse on motivation to learn as they looked at motivation to learn as a students' desire to take part in learning and learning from a training activity. It is therefore the driving force that drives students to continue engaging with learning process in order to achieve their study goals (Autio, Hietanoro & Ruismaki, 2011). For this reason, divers research on learning motivation has been pursued for many study subjects (Charlesworth, Charlesworth, & Barton, 2003); (Fung & Yip, 2014); (Aydin, 2015); (Chumbley, Haynes,&Stofer, 2015); (Rensburg, 2015); (Kwon,2016).

All in all, students can either be intrinsically or extrinsically motivated to learn. This opinion is supported by well-meaning scholars as (Afzal et al, 2010; Pintrich and Schunk, 2001). People are intrinsically motivated to do some tasks and not others, not every person is intrinsically motivated for any particular tasks. This is basically because intrinsic motivation lies in the nexus between a person and a task. Students who are intrinsically motivated will read at any opportune time they get because of internal interest and for self-gratification whilst those that are extrinsically motivated put forth the least amount of struggle necessary to get most reward or will read when it comes with certain benefits like praise, recognition, or any other system of reward (Afzal et al, 2010). In reality, students may put forth resentment, resistance or disinterest in performing an extrinsically motivated task or, alternatively, they put forth an attitude of willingness that shows an inner acceptance of the value of the task. In the former case of extrinsic motivation, one feels externally propelled to perform the action, but in the later case, the action is self- endorsed and thus adopted with a sense of volition. These two motivation types are significant in the learning environment. The encouragement of intrinsic motivation can promote lifelong learning. Therefore, teachers need to make the effort to stir-up students' interest in the subject matter by demonstrating the relevance of the content, maintain curiosity by possibly using a variety of interesting presentation modes and encourage collaborative learning and guiding students to set their own goals. Extrinsic motivation can be used when dealing with uninteresting tasks but care should be taken to ensure that these motivators are contingent on performance and recognize competence (Deci, Egharari, Patrick, and Leone, 1994)

2.1.2. Theory of motivation

Following some theorists who tried to explain the role of motivation in the learning and teaching process. This study adopts the motivation theories of the following scholars in order to ascertain the impact of ICT in teaching and learning social studies in SHS.

2.1.2.1. Lev Vygotsky

While Piaget believes that motivation was intrinsic, Vygotsky believe that it is solely extrinsic. Vygotsky also had the notion that even though motivation was very significant for learning it was not essential. In better to understand Vygotsky, in his theory of Zone of Proximal Development where he said students will be motivated by selecting problems that are interesting as the basis for instruction and will work even better if they get assistance from the teacher. Sometimes, task that teachers want their students to perform are not inherently interesting, and thus, knowing how to promote more active and volitional forms of extrinsic motivation makes an essential strategy for successful teaching. The only role the teacher has to play is to use extrinsic motivators to entice students to keep learning and accomplishing things independently that in the past, was considered difficult (Barnes, 2008).

Motivation is optimal when students are working on tasks within their Zone of Proximal Development. So it would be important for teachers to monitor students to ensure they are working within their ZPD as a way to promote learning. However, given time to individual student maybe challenging when the class size is huge which, in most cases is the situation at Ghanaian SHSs. Regardless, countless researches have proved that paying attention to individual learner goes a long way in increasing student motivation and consequently increase their performance. In addition, Vygotsky corroborated that what students learn will naturally motivate them thus, teacher should ensure that tasks given in classrooms are appropriately challenging, culturally relevant, and that the

curriculum and instructional activities are appropriate.

Another aspect of Vygotky's theory where the teacher leads the discourse and makes each student feels that their opinions are valued is the discussion-based classroom, which to Vygotsky increases students' motivation. ICTs are currently the tool to help the teacher to engage the students actively in the learning process (Keller &Susuki, 2004) and as a facilitator, creating the environment of directed and guided interactions. On the same note, ICT provides opportunity for discussions not just during class time, but also after through social media.

2.1.2.2. Albert Bandura

According to Bandura, our motivation is effected by others through vicarious experiences of observing others. When we observe someone go through task and successfully complete it and are rewarded, as a result, we are motivated to engage in that practice. Thus, providing opportunities for students to observe effective models who are reinforced for taking desired actions and encouraging them would be a good way of enhancing student's self-efficacy and thus improve their learning.

Unlike Skinner, Bandura (1977) highlighted on meditational process where he believes that learning doesn't just occur but also involves a cognitive process that occur between observing the behaviour (stimulus) and imitating it or not (response). This meditational process consists of four processes (ie. attention, retention, reproduction and motivation).

For behaviour to be noticed and imitated, it has to grab one's attention. This when viewed in a classroom situation, for students to be motivated towards learning, the subject matter must catch their attention. The display of various symbols, pictures and models during the teaching and learning process in the classroom by using ICTs goes a long way to help the teacher capture students' attention. This help learners relate what they see with what they hear. Using of ICTs in drawing learners attention is supported by researchers like (Su, 2011). Aside paying attention during learning, there has to be a memory of behaviour for it to be performed later. This could be the main reason why students forget a huge part of what they learn during a lesson. Retention of what is learnt leads to good performance (Su, 2011). ICTs have been considered to be useful tools to help students in the retention of content learnt, depending on how rich the lesson is prepared by the teacher. Sometimes students might forget specific themes learnt but remembering what they have seen on videos or even PowerPoint presentation; it might be able to trigger the memory which will help remember what was taught.

There is no doubt that paying attention and remembering are crucial in the teaching and learning process, students also need to have the ability to reproduce what they have learnt. One good thing about using ICT in class is that the teacher can allow the student to replicate a certain skill that has been demonstrated earlier during the lesson. Successful demonstration of a skill may proof to the teacher that a concept has been understood. Finally, mastery of skills leads to self-efficacy on the part of the learner and this is one of the basis for motivation. If students have high self-efficacy for a certain learning task, they will put forth more effort to accomplish that task and as a result they will be more likely to succeed than students with lower self-efficacy on the same learning task.

2.2. History of ICT integration in Ghana Education

Ghana as a developing country started placing strong emphasis on the importance of ICT after realizing it can contribute to the country's economy. In the medium-term development plan highlighted in the Ghana Poverty Reduction Strategy Paper (GPRS I&II) and the Education Strategic Plan 2003-2015 clearly suggest the use of ICT as a means of reaching out to the poor in Ghana.

Parliament in 2004 passed into law the ICT for Accelerated Development (ICT4AD) policy, which is currently running at various stages of implementation.

As one of the first African countries to liberalize its telecommunication sector, Ghana has made tremendous effort in ICT infrastructure deployment. But like many parts of Africa, the ICT revolution in Ghana has left behind the internet and computing. There are significant differences in urban and rural access to ICTs.

When it comes to ICT in education, Ghanaian tertiary institutions are the most advanced in the deployment and use of ICTs in the country. The major universities have their own separate ICT policy, which levy every student in order to enable them have access to 24-hour computer labs with broadband connection. Due to difference in facilities, not all tertiary institutions in the country are endowed and there are instances where the computer facilities are run by the private sector as cyber cafés on campuses. The creation of computer laboratories in all science schools across the country has led to a significant number of computer installation in the basic and secondary schools. A computer levy is charged on every student in most secondary schools. There is a great disparity between public and private schools as well as between urban and rural areas in access to ICTs.

There is high commitment at both the presidential and ministerial level at improving the quality of education through the use of ICT. Though a lot has been done for the integration of ICT but there still exist some inhibiting factors including the following:

- Access to ICTs still remains highly inadequate and unevenly distributed through Ghana, with an urban bias.
- The capacity of teachers and educators to deliver policy still remains low with many averse to adopting ICTs in the classroom or with inadequate skills.
- There is lack of adequate collaboration between the Ministry of Education and Ghana Education service or other implementing agencies such as ministries, departments, and agencies.
- There are inadequate partnerships and collaboration between the ministry and the private sector.

As seriously as Ghana government and other stakeholders are trying to see the implementation of ICT in the education sector but has not fully yielded that goal yet, there is therefore the need for this study into the impact of ICT integration in the teaching and learning of Social studies in SHS.

2.2.1. ICT in Social Studies

The integration of ICT in social studies was considered as 'a sleeping giant' by Martorella(1997), due to the fact that ICT infusion into social studies lessons had not been popular like in other subject areas (Doering, Scharber, Miller & Veletsianos, 2009; Martorella, 1997; VanFossen & Waterson, 2008). The rate at which it was integrated into other subject areas was faster compared to social studies (Bolick, Berson, Friedman & Porfeli, 2007; Zhao & Bryant, 2006). Several scholars in order to promote ICT integration in social studies have research to identify the potentials of ICT integration in the social studies classroom Doering et al., 2009; Friedman, 2006; Lee & Calandra, 2004). As reported in previous studies, ICT can help (1) motivate students' engagement in the social studies classrooms, (2) enhance their social studies learning, (3) make social studies an appealing subject, and (4) improve their problem-solving, communication, decision-making, and research skills (Berson, 1996; Cassutto, 2000; Gulbahar & Guven, 2008; Martorella, 1997; National Council for the Social Studies, 1994). A case study conducted by Heafner (2004) to identify positive effect of ICT use in social studies revealed that students improved their self-efficacy and self-confidence by successfully accomplishing their assignment with Microsoft PowerPoint. It was also found out that students learned collaboratively by helping each other.

ICTs of various types have been developed and implemented for social studies learning. Taking history subject as an example, some studies have employed various web-based historical materials and databases to enhance students' historical thinking and inquiry skills (Friedman, 2006; Hicks, Doolittle & Lee, 2004; Saye & Brush, 2002). Other researchers have also adopted digital games and historical simulations (Devlin-Sherer & Sardone, 2010; Lee & Probert, 2010). In geography, various geospatial technologies, such as Google Earth, have been used as a visual aid for multimedia learning to illustrate geographic concepts (Campbell, 2008; Cin & Tabanlı, 2015; Meyer, Butterick, Olkin & Zack, 1999). In addition, many researchers have proved that geospatial technologies are useful tools in promoting students' spatial thinking and geographic reasoning skills (Goldstein & Alibrandi, 2013; National Research Council, 2006).

With accordance with the trends in computing technology development and innovation, various ICTs have been implemented in social studies. A large amount of historical content has been made available online (Friedman, 2014) since the late 1990s and the early 2000s. According (Cohen & Rosenzweig, 2006), these contents have impacted hugely on the teaching and learning of social studies. By the use of Web 2.0, the internet in the social studies classroom has been use in more interactive way (Friedman, 2014). Through the use of Web 2.0, students are able to create information freely, share and collaborate with others (Alexander, 2006; O'Reilly, 2007). The use of mobile apps on smart phones and tablet computers are also available for teaching and learning of social studies. Former studies have revealed a high level of student engagement with mobile technology (Schachter, 2009). It can be said that more and more social studies teachers are integrating various forms of ICTs in their teaching (Bolick, Berson, Coutts & Heinecke, 2003; Hicks et al., 2004). It can be deduced from previous studies that, many social studies teachers have come to recognize the value of ICT integration in their lessons, and various type of effective ICT tools available for social studies learning.

2.2.2. ICT and motivation

A study conducted by (Passey et.al 2004), into the motivational effect of ICT on students and the impact ICT have on students' interest in and attitudes towards school work. The study aimed at identifying good practical examples of ways ICT effectively improves students'motivation (Passey et.al 2004, p.9). The findings from the study showed that students' use of

ICT led to positive motivational outcomes, this was most frequent when ICT was used to support engagement. Passey et.al (2004) in their findings indicated that ethnic background appeared to be impartial to motivation compared to socio-economic background which had significant impact in terms of access to ICT tools either at home or in the school. Teachers in the study also indicated that they perceived positive impact on students' interests and attitudes towards school work when infusing ICT in the classroom. A study conducted on ICT as a motivational tool in the learning of foreign languages by Frydrychova Klimova and Poulova (2014). The study focuses on EFL and the role ICT plays on students'motivation. Frydrychova Klimova and Poulova (2014) explained that teachers should ―make learning stimulating and enjoyable by breaking the monotony of classroom events, and ―increasing the attractiveness of tasks‖, but also ―administer tasks in a motivating way and ―Increase student motivation by promoting cooperation among the learners (Frydrychova Klimova & Poulova 2014, p.53). Frydrychova Klimova and Poulova (2014) further explain that these conditions can be achieved by incorporating ICT in the classroom and the results of this can therefore lead to more independent and personalized learning, but also more collaborative and interactive. The teaching can also become more varied, dynamic and matching more students' immediate needs (p. 53). They further explained that all teachers except one said their students enjoy working with ICT tools in the classroom. Students are more active and believe that the lessons are interesting with varied teaching methodology which gets them motivated. A study by Bullock explains that students showed enthusiasm towards group work, and teachers interviewed in the study disclosed to have seen an improvement in students' motivation (Bullock 2001, p.2). The key findings from Bullock's (2001) study were that ICT integration in teaching leads to group work, and at the same time enable students to work more independently, thus leads to students' enjoyment of tasks presented (p. 2). In the study, some disadvantages of using ICT were the quality of equipment and technical problems which led to reduced enthusiasm and motivation towards a task (Bullock 2001, p.5).

2.2.3. ICT Usage

There is no doubt that the internet and other ICT resources constitute a great deal to knowledge dissemination and opportunities for development and growth among nations in the world. The use of computers in education effectively may be an essential factor in determining the success of countries in the future. It is evident in the literature that the integration of ICT (ie: computer, internet mobile phone etc) effectively in teaching and learning can facilitate the acquisition of 21st century skills. ICT has various ways in which it is used to perform tasks.

The use of ICT is a variable asset in effective education, and therefore the use of ICT in education can be realized if students have access to ICTs and use them in their teaching and learning practices. This being the case, access to and use of technology in schools and institutions might be problematic in developing countries compared to developed ones due to its expensiveness. According to Ministry of Education, 2002, access to and use of ICT tools in terms of ratio of teachers and students might differ significantly among developing countries and developed countries. The presence of ICT has brought about massive technological, social, political and economic transformation, which has resulted in a network society organized around ICT (Yusuf, 2005). He further argued that ICT is an indispensable part of educational administration for that fact that its application makes institutions efficient and effective, hence using a variety of tools to enhance and facilitate teachers' pedagogical activities. Taking e-learning as an example, it's one of the most used means of using ICT to provide education to students via online teaching.

2.2.4. Teacher's attitudes and beliefs in ICT use

Teachers' positive attitude towards ICT plays a major factor in integrating technology into the teaching and learning process. Many researchers are of the same opinion (Cohen, 1987; Cuban, 1986; Czerniak & Lumpe, 1996; Lai et al., 2001) teachers' attitudes and beliefs affect the way technological innovation is applied in education. Teachers tend to use technology in ways shaped by their own personal perspectives on the curriculum and on their teaching and learning practices. As was found out by Bullock (2004) that teachers' attitudes are the key factors to the adoption of technology. On a similar note,(Kersaint et al, 2003) found out that teachers with positive attitudes towards technology tend to feel comfortable in infusing it in their lessons. This is to say that the successful transformation in educational practices requires users to develop positive attitudes towards new technology (Woodrow, 1992). As stated by (Clark & Peterson, 1986; Fang, 1996; Pajares, 1992; Zeichner et al, 1987) that teachers attitudes and beliefs influence what they learn from their education and training programmes and the kind of didactic practices they apply in their classroom. Other research has shown that most educational reform initiatives have failed due to the fact that they did not influence the beliefs of the

teachers (Cohen & Ball, 1990; Elmore, 1987). There is however significant positive correlation between teachers' attitudes towards ICTs and five independent variables namely cultural perceptions, computer competence, computer access and computer training (Albirini & Abdulkafi, 2004). However, what these researchers failed to investigate is the teachers' perceptions towards the ICT resources made available to them.

2.3. Challenges of ICT integration in classroom

2.3.1. Availability of ICT infrastructure

A study by Mumtaz (2000) reveals that limited resources within schools are a great barrier to embracing technology. Taking for instance the non-availability of computers and software in classroom greatly affect teachers' use of ICT. A large body of research have shown that only a meager proportion of the African populace has access to computers (Murphy, Anzalone, Bosch, & Moulton, 2002) and 4% connects to the internet (Resta&Laferriere, 2008). Aguti and Fraser (2006) reiterated that lack of ready access to technologies by teachers is a key barrier to technology integration in most developing countries. Others like (Benson &Palaskas, 2006; Snoeyink&Ertmer 2002) see resources as an important key player in the implementation of an innovation in schools.

Ottesen (2006) in his doctoral dissertation revealed that the unavailability of computer infrastructure is a basic menace in integrating ICT in schools. In another study Norris et al, (2003) shows that having access to the right technology infrastructure is essential in the effective ICT integration process. In a related study, Yildrim (2007) revealed that teachers affirmed that access to ICT infrastructure is a key factor to effectively integrate ICT in classrooms. Therefore it is very significant for the deployment of adequate ICT resources in our SHSs in order to successfully integrate ICT in the teaching and learning process.

2.3.1.1. Teacher preparedness and willingness

For any implementation of any sort to succeed it is always better for the users of the innovation to have sufficient knowledge and competence to do it (Ely, 1999,). In the case of ICT integration in teaching and learning which require the use of tools and techniques, without enough preparation to use the tool, the initiative will fade out sooner than expected. Webb and Cox (2004), states that the lackadaisical attitudes of teachers towards technology-based innovation might be that they lack technological knowledge and skills in planning instruction. This concept has recently been created by Mishra and Koehhler (2006) and Harris, Mishra, and Koehhler (2009), who propounded that there is the tendency for teachers not to harmonized their content and pedagogical knowledge with their technological knowledge, and that this can result in jejune ICT implementation in the classroom. Together with the development of teachers' knowledge and skills, their attitudes towards ICT integration also need to be well comprehended. Christensen and Knezek (2008) states that teachers' attitude is a contributing factor in determining the use of computer as a learning tool and the fact that teachers will effectively use ICT for teaching.

2.3.1.2. Professional development and training

It is worth mentioning that inadequate pre-service and in-service is another hindrance to teachers to integrate ICT in their classroom instruction (Yaghi, 1997; Yildrim, 2000). A number of researches support the same position that teachers should receive effective, timely and continuous training in order to promote technology in their instruction (Wilson, Notar &Yunker, 2003; Yildrim, 2000; Yildrim & Kiraz, 1999; Lemke, 1999; Northrup & Little, 1997). There has been a lot of attention on the issue of ICT training in pre-service and in-service teacher professional development. Baylor and Ritchie (2002) have indicated that teachers' ICT skills training significantly influence how well ICT is subsumed in the classroom. As (Dupagne & Krendl, 1992) indicated that in-service training is a key component in cultivating the right attitudes to ICTs. It is very crucial on how teachers construct and reconstruct their knowledge since their thought processes largely influence what happens in the classroom. Hence, the quality of in-service training should be of utmost importance. It is noted that teachers' pedagogical decisions and actions are in connection with their professional development. In a related research Lai et al (2001), revealed that school based professional development is well handled by the ICT coordinators, who usually have the requisite training and the technical know- how of integrating ICTs into the school curriculum and provide better role models for teachers.

However, some research into in-service training has shown that what the training program often offers fails to meet the teachers' real needs (Tella&Adinkra, 2007; Crook, 1994). It is therefore imperative for pre-service teachers and in-service teachers in Ghana to be given the right technological training in other to successfully integrate ICT in their teaching. Thus, be trained to use the ICTs as a teaching tool to enhanced learning

2.3.1.3. Resistance to change

ICT integration in education received a lot of attention but some educators were also not ready to accept it into their teaching and learning process. There have

been studies and analysis of the resistance factors that thwart the integration and implementation efforts. Zaltman and Duncan (1997) define resistance as —…any conduct that serves to maintain the status quo in the face of pressure to alter the status quo.‖ There are a number of studies that have indicated that ICT infusion is most resisted by schools.

For example, Mumtaz (2000) explained that because of the resistant of schools towards the infusion of ICT, institutions do not give ample time to teachers to enable them deal and accustom themselves with ICT-based innovation and moreover, instructional time available to teachers does not allow teaching with ICT. Several studies (e.g Bate, 2010; Dawson &Rakes, 2003; McGarr& Kearney, 2009) is in agreement with the notion also that leadership promoting change is of significant when it comes to blending ICT and instruction.

2.3.1. ICT Effectiveness in teaching and learning

Many studies have been made to ascertain the impact of ICT in educational performance. The International Association for the Evaluation of Educational Achievement (IEA) sponsored study is an exemplary study which identifies and describes the educational use of ICT across 26 countries in the world. The study covers areas like the use of computers in teaching through sampling teachers, principals and ICT responsibility in schools. Though the study did not look into the student achievement, it did look at the perceived impact of ICT on students from the teacher‘s perspective (Pelgrum&Ardenson, 1999; Kozma, 2003). Balanskat et al (2006) examined many studies on the impact of ICT on schools in Europe. They concluded by saying that the evidence is scarce and comparison is restrained. This is due to the fact that different approaches and methodologies were used and therefore comparison between countries should be made cautiously. In other studies (Yusuf, &Afolabi, 2010; Shaikh, 2009; Jayson, 2008; Shaheeda et al., 2007) it is contended that ICT helps to improve the quality of learning and educational attainment. Researchers like (Iqbal, & Ahmed, 2010; Hameed, 2006; Amjad, 2006; Khan, and Shah, 2004) believe that, for a country to be successful, it needs to improve its educational system by implementing a very efficacious and robust ICT policies.

In contrast, Trucano (2005) reviews a series of studies on ICT impact on schools and makes a conclusion that the impact of ICT use on learning outcomes is quite uncertain. However, Cox and Marshall (2007) unveil that ICT studies and indicators do not exhibit solid effect. Machin et al (2006) contends that there is no clearly stated case available that shows that using ICT enhance the computer skills of students and thus the role of technology-enhanced learning (TEL) is more contentious. Due to the difference in results of many studies, it has made it extremely difficult to have well-developed theoretical case and empirical evidence to support the expected benefits amassing from the utilization of ICTs in schools (Kirkpatrick & Cuban, 1998). However, while Becta (2002) and Kulik (2003) believe to have found positive effect on the use of ICT and educational accomplishment, though researches by Fuchs and Woessman (2004), Leuven et al (2004) or Goolsbee and Guryan (2002) actually finds no significant positive effect of the use of ICT on educational outcomes so far as other factors are in play, such as school characteristics or socio-economic background are taken into account. It is therefore imperative to delve more into the impact of ICT integration in teaching and learning of specific subjects to ascertain ICT usefulness in the classroom and on students’ achievement.

3. METHODOLOGY

3.1. Theoretical Framework

Basing on the theory of motivation, for teachers and students to be motivated towards learning, the subject matter must catch their attention, thus the use of various ICTs during instructional period. Motivation of students in the teaching process leads to effective use of ICTs in learning which eventually leads to good performance. In the works of Ryan and Deci (2000), they stated that intrinsic motivation is an important type of motivation but most of the activities people do are not intrinsically motivated. They further stated that that, —in schools, for example, it appears that intrinsic motivation becomes weaker with each advancing grade. This especially occurs right after the early childhood as the freedom to be intrinsically motivated is vehemently shielded by social demands and also taking on non-intrinsically interesting tasks. Given that these days activities prescribed in schools especially in the senior high are not designed to be intrinsically interesting, it is only by external influence that students are inclined to participate fully in such activities. Taking social studies as a subject in the senior high and its abstract nature, it becomes more difficult for students to maintain full concentration throughout two- period lesson without being bored or exhausted with long lecture. In view of that, applying various forms of ICTs during instructional period will enhance students’ attention capacity and eventually the improvement in their performance.

3.2. Research design

This study adopts both qualitative and quantitative design approach to help generate and draw the needed information for analysis, presentation and discussion. This study used a case study design as sub design

under qualitative to examine the impact of ICT integration in social studies teaching and learning SHSs in the Eastern region of Ghana. The primary purpose of this design is to understand something that is unique to an identified case as opined by (Creswell, 2013, Yin, 2009). Using the case study design gave the researcher chance to study the phenomenon in details and provide objectivity within the limited time frame. This can be said to be in conform to the view of Osula (2005) which states that case study will enable the researcher to collect data from and within a geographical boundary to produce an understanding of the study subject.

3.3. Population and sample size

The population target for the study was teachers and students in public SHSs in the Eastern region of Ghana; this is because it is convenient to conduct the research in this region due to proximity. Also the researcher is familiar with the region and it is much easier to access than other regions. Purposive sampling was used to select teachers from each school, the researcher employed own expert judgment about which to include in the sample. Samples were selected based on suitability and purpose of the study. Teachers and students of these schools were enrolled in the study. Teachers for social studies were targeted because the study was focused in the subject area in the SHSs. On the other hand, students were targeted because they were expected to use various ICTs in the teaching and learning process to acquire knowledge.

The study used simple random sampling to select students within the selected schools in the region to be part of the study. The simple random sampling is a technique that gives individuals in the population the equal opportunity to be selected (Onwuegbuzie& Collins, 2007). This gave individuals in the population an equal chance of being recruited in this study. A total of eighty-five (85) teachers were selected from the schools and two hundred and fifty- three (215) students randomly from the schools were selected as participants. In all, a total of three- hundred (300) respondents were used.

3.4. Research instrument

The main instrument for this study was the use of questionnaires and interview since the study employed the mixed method thus both the quantitative approach in the form of questionnaires and qualitative approach, by a way of interview were used during data collection. Hence, both structured interviews and structured questionnaires were used in the data collection. Teachers and students filled questionnaires. The questionnaires consisted of three sections. Section A sought the biographic data of participants while the rest of the sections were structured to answer the research questions. Aside from the section A, all items were statements based on a five-point Likert scale format. The structured interview guide was employed to interview selected social studies teachers. The interview guide was only on the challenges of hindering ICTs in the teaching and learning practices and items were mainly open-ended, giving respondents the chance to express themselves in depth. This instrument was used for the selected social studies teachers and particularly on the challenges because it enabled them to provide as many problems that hinder technology-aided instruction in their schools. The interview with each teacher lasted approximately 30 minutes. The interviews were conducted on the same day the questionnaires were administered. The administration of the instruments was based on variables under the objective of the study. This gave participants the opportunity to share their views on the influence of ICT integration in their respective schools, the challenges in their use and also impact on students' performance in an ICT integrated lessons. Students participating in the study were guided to fill out questionnaires.

3.5. Ethical Consideration

A research ethics simply put, describes the various actions the researcher of a study carry out. According to Cresswell (2014), ethical rules in a study contain two main areas; research requirements and individual protection requirements. The society as well as individual participants have the right to demand that the research conducted is of high quality and ensure that the case under study is properly verified. Also, participant protection which consists of confidentiality, consent, information and utilization requirements are vital throughout the study.

The researcher took into consideration all ethical issues while on the field. The researcher sought permission from school authorities before interacting with participants in the various schools. In order to avoid any suspicions, a teacher was assigned to be with me throughout my interaction with participants. Consent forms were provided for participants to sign before data collection. The significance of the study was clearly communicated to participants before the instruments were administered. Participants were informed that the study was strictly for academic purpose and the data was going to be treated with a high degree of confidentiality thus, participant's privacy, anonymity was guaranteed.

3.6. Data presentation and data analysis

Data was generated using descriptive and analytical statistics. Data obtained from this study were presented in form of charts, graphs and tables through the use of Statistical Package for Social Science

(SPSS) version 25.0, and Microsoft office excel 2010. This made data entry quick than the manual process and reduces human errors. The charts, graphs and tables were explained based on information gathered. Data obtained from interview was first transcribed into written text and analyzed supported by verbatim extracts from participants.

The research analysis was staged using univriate, normality test, exploratory analysis, confirmatory analysis, reliability test, correlation and regression analysis. Conclusion for this study was drawn from the results of the detailed analysis of data collected. The outcomes from this study were compared to existing studies where the researcher made recommendations and directions for policy makers, educators and future researchers.

3.7. Relationship of the study

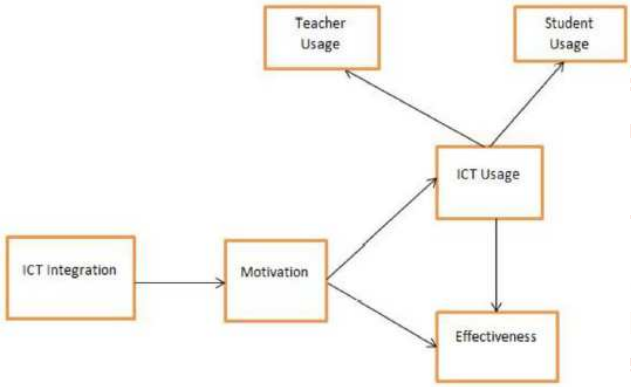

Figure 1: Relationship of the variables

3.8. Hypothesis

- H1 There is a positive correlation between ICT integration and Motivation
- H2 There is a significant association between Motivation and (i) Teacher ICT usage and (ii) Student ICT usage.
- H3 There is a significant relationship between (i) Teacher ICT usage and (ii) Student ICT usage and effectiveness.
- H4 There is a positive relationship between motivation and effectiveness.

DATA PRESENTATION AND ANALYSIS

4. Overview

Four hundred (400) respondents, both teachers and students in SHSs in the Eastern region of Ghana were targeted to provide information pertaining to impact of ICT integration in social studies teaching and learning practices. Approximately, 75% indicating 300 respondents were obtained with 85 and 215 respondents for teachers and students respectively. Utilizing the Microsoft excel 2010 version, the research data was screened for missing data and unengaged responses. 41 (10.25%) cases were discarded from the 300 showing potential problems of missing data and unengaged and 24(6%) respondents who were not able to reach at all. Consequently, 235 cases (58.75%) were accepted for coding and further screening in the IMB SPSS version 25.

4.1. Bio-Data of Respondents

In response to the survey questionnaires, descriptively, 102 (43.4%) representing males and 133(56.6%) constituted females. On the educational level of the research respondents, 153(65.1%) recorded SHS & below education, 67(28.5%) had Degree/DIP/HND, 15(6.4%) formed Master Degree & above Education. On the score of age, 160 (68.1%) had 25 years & below, 49(20.9%) had 26 to 35 years and 26(11%) had 36 years and above. On the respondent type, 153 (65.1%) respondents represented students and 82(34.9%) respondents represented teachers. The tables 3, 4, 5 and 6 below present detail information on respondents' bio-features.

Table 1: Gender distribution of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	102	43.4	43.4	43.4
	Female	133	56.6	56.6	100.0
	Total	235	100.0	100.0	

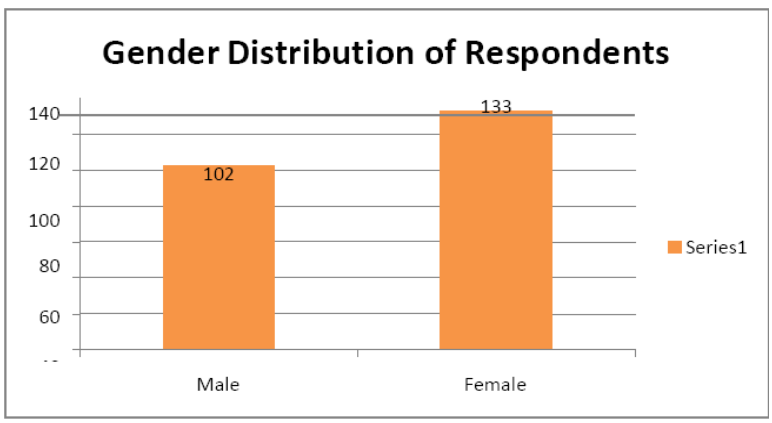

Figure 2: Gender Distribution of Respondents

Table 2: Age distribution of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25 and above	160	68.1	68.1	68.1
	26-35	49	20.9	20.9	89
	36 and above	26	11	11	100.0
	Total	235	100.0	100.0	

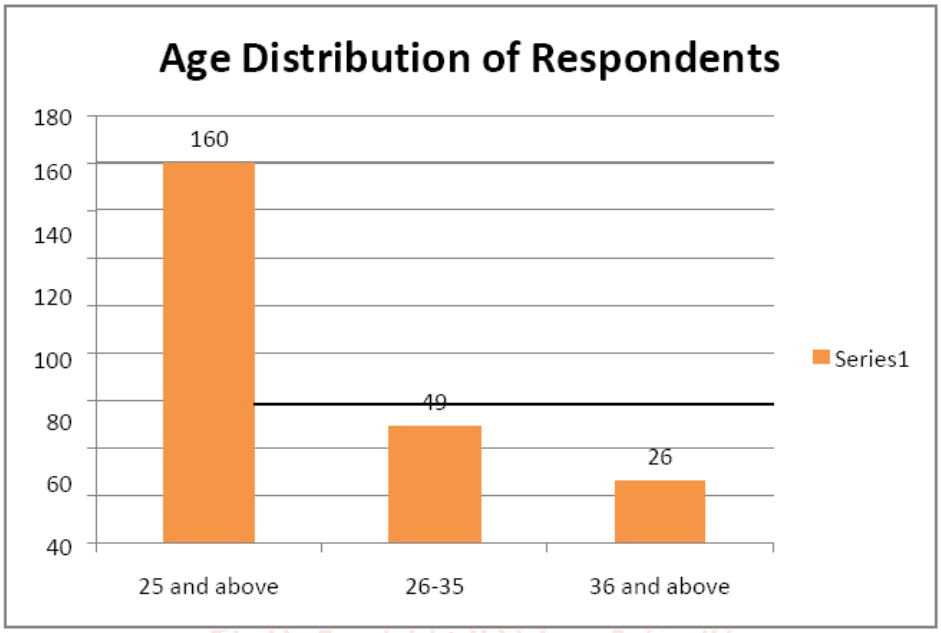

Figure 3: Age Distribution of Respondents

Table 3: Education level distribution of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SHS	153	65.1	65.1	65.1
	Degree/Diploma	67	28.5	28.5	93.6
	Master and above	15	6.4	6.4	100.0
	Total	235	100.0	100.0	

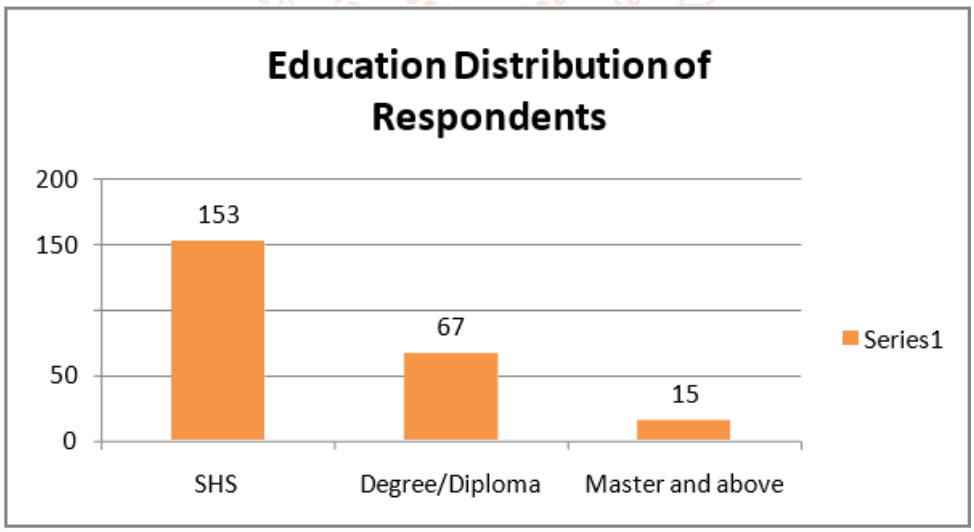

Figure 4: Education distribution of respondents

Table 4: Respondents type distribution

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Student	153	65.1	65.1	65.1
	Teacher	82	34.9	34.9	100.0
	Total	235	100.0	100.0	

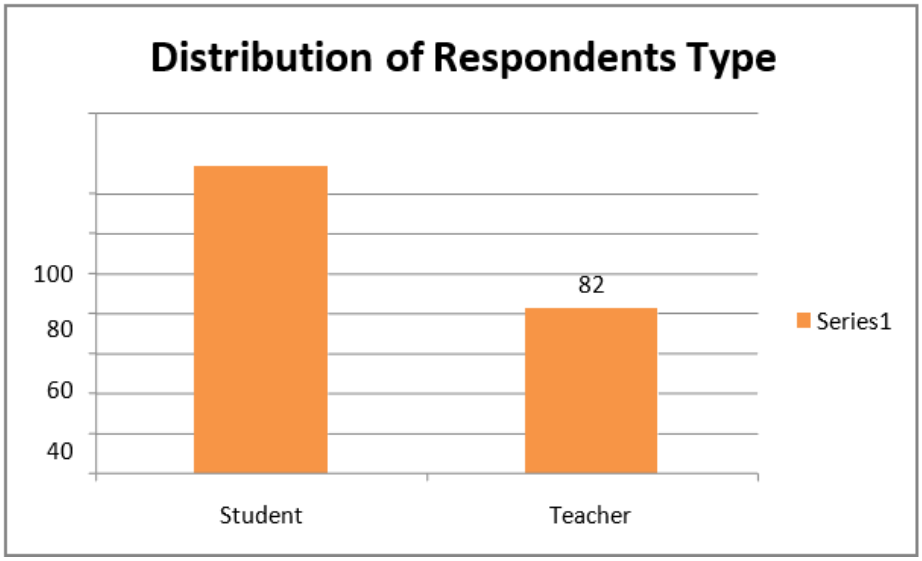

Figure 5: Distribution of respondents' type

4.2. Reliability Test

Validity and reliability assessment was performed. The predictive strength and internal consistency within the measurement items were examined for convergent validity, discriminant validity, composite reliability and Cronbach"s alpha. Average Variance Extracted (AVEs), the Square roots of AVEs, MSVs and ASVs were computed, examined and compared to assess convergent and discriminant validity. The observed AVE values were above .55 and the diagonal estimates for the variable correlations were greater than the correlation coefficients among inter-factors. The MSV and ASV estimates were less than the AVE values, indicating constructs' good discriminant validity (Fornell& Larcker, 1981; Hair, Black, Babin, & Anderson, 2010). Again, the composite reliability (CR) estimates and Chronbach"s alpha ratios ranged from .83 to.94, indicating good internal reliability for all the constructs (Bagozzi, 1993; Hair et al., 2010).

Table 5: Construct descriptive statistics, validity and reliability

Constructs	Mean ±SD	AVE/b	CR(a)	Skewness	Kurtosis
ICT	27.64±7.72	.49/.70	.85(.94)	-.664	-1.001
Motivation	34.82±11.45	.58/.76	.92(.93)	-.552	-.968
ICT Usage	20.19±7.52	.52/.72	.84(.94)	-.267	-1.164
Effectiveness	22.52±6.44	.62/.79	.86(.88)	-.574	-.755

Note: CR= Composite reliability; a= Cronbach"s alpha estimates for internal consistency;
b= square roots of variance explained; AVE=average variance extracted.
***p<.05, **p<.01, ***p<.001**

Table 6: Construct descriptive statistics and CFA

		Items univariate statistics		CFA Loadings
Items contents	Mean±SD	Skewness	Kurtosis	Γ
Effectiveness	22.52±6.44			.88
Eff 1	3.47±1.46	-.444	-1.303	.86
Eff 2	3.57±1.53	-.608	-1.248	.83
Eff 3	4.19±1.12	-1.534	1.442	.87
Eff 4	3.46±1.36	-.427	-1.062	.85
Eff 5	3.91±1.27	-1.248	.533	.87
Eff 6	3.91±1.27	-1.248	.533	.87
Usage Total	20.19±7.52			.94
Usage1	3.75±1.48	-.621	-1.254	.93
Usage2	3.06±1.47	-.071	-1.421	.93
Usage3	3.37±1.27	-.367	-1.337	.92
Usage4	3.13±1.26	-.038	-1.450	.94
Usage5	3.48±1.35	-.558	-.852	.92
Usage6	3.40±1.47	-.415	-1.301	.91

Motivation Total	34.82±11.45			.93
Moti1	3.71±1.47	-.548	-1.299	.91
Moti2	3.06±1.52	.141	-1.594	.92
Moti3	3.74±1.42	-.727	-.899	.92
Moti4	3.05±1.46	-.132	-1.445	.93
Moti5	3.68±1.48	-.521	-1.363	.92
Moti6	3.74±1.48	-.585	-1.316	.92
Moti7	3.14±1.64	-.086	-1.699	.92
Moti8	2.98±1.61	.083	-1.667	.93
Moti9	3.39±1.41	-.434	-1.286	.93
Moti10	4.33±.89	-.990	-.242	.93
ICT Intl	27.64±7.72			.94
ICT Intl1	4.08±1.07	-.832	-.336	.93
ICT Intl2	4.03±1.10	-.765	-.455	.93
ICT Intl3	4.18±1.09	-1.326	1.009	.92
ICT Intl4	4.23±.97	-.902	-.429	.92
ICT Intl5	3.66±1.55	-.660	-1.226	.93
ICT Intl6	3.68±1.54	-.706	-1.128	.93
ICT Intl7	3.78±1.44	-.738	-1.052	.92

4.3. Testing Hypotheses

4.3.1. Correlation

Hypothesis 1 which examines the relationship between ICT integration and Motivation (r=.64, p<.001) was supported. *Hypothesis* 2, which examines the significant association between Motivation and ICT usage (r=.42, p<.001) was supported. *Hypothesis* 3, which examines significant relationship between ICT usage and effectiveness(r=.30, p<.001) was supported. *Hypothesis 4,* which examines the relationship between motivation and effectiveness (r=.58, p<.05) was supported.

Table 7: Partial correlation of the relationship between ICT Integration in Social Studies

Control Variables	Variable Content	ICT lnt.	Motivation	ICT Usage	Effectiveness
Gender & Age	ICT lnt.	-			
	Motivation	.64***	-		
	ICT Usage	.57***	.42***	-	
	Effectiveness	.60^{NS}	.58*	.30***	-

***p<.05, **p<.01, ***p<.001**

4.3.2. Regression

Testing the hypotheses, social studies effectiveness (dependent variable) was regressed on exogenous variable ICT integration, motivation and ICT usage (independent variables). The model showed a significant relationship with the criterion variable (b=.17). The multiple regression model with all the three predictors produced R^2 = .867, F(500.472) = 6.50, p < .001. The ICT usage had significant positive regression weights with (b=.908, p<.001) indicating teacher and students with higher scores on these scales were expected to have acquired higher social studies effectiveness. The three predictors accounted for 86.7% of the variance in the criterion variable and social studies teaching and learning effectiveness. This is the growth when the independent variables in the model that is ICT integration, motivation and ICT usage; are all equated to zero. Beta values as recorded by the Table also indicate independent variable rankings in their order of impact on social studies effectiveness. It revealed that ICT Usage (β= .908) has the highest impact in predicting the variation in social studies effectiveness, followed by ICT Integration (β= .077) and Motivation (β= -.042).

Table 8: Regression model summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.931[a]	.867	.865	.36752079	.867	500.472	3	231	.000

A. Predictors: (Constant), ICT Usage, ICT lnt, Motivation B. Dependent Variable: Effectiveness

Table 9: Regression Anova table ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	202.798	3	67.599	500.472	.000[b]
	Residual	31.202	231	.135		
	Total	234.000	234			

a. Dependent Variable: Effectiveness
b. Predictors: (Constant), ICT Usage, ICT lnt, Motivation

Table 10: Regression coefficients table

Coefficients[a]													
		Unstandardiz ed Coefficients		Standar dized Coeffici Ents			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-2.044 E-15	.024		.000	1.000	-.047	.047					
ICT Int.	.077	.056	.077	1.361	.175	-.034	.188	.690	.089	.033	.182	5.496	
Motivation	-.042	.062	-.042	-.678	.499	-.164	.080	.728	-.045	-.016	.151	6.615	
ICT Usage	.908	.038	.908	23.932	.000	.833	.982	.930		.575	.401	2.492	

a. Dependent Variable: Effectiveness

4.3.3. Multicollinearity

In statistics, multicollinearity is a phenomenon in which one predictor variable in a multiple regression model can be linearly predicted from the others with a substantial amount of certainty. With this, the coefficient estimates of the multiple regressions may change erratically due to a shift in the beta. The predictive power of the model as a whole is not reduced at least within the same sample data set by multicollinearity; it only affects calculations pertaining to individual predictors. That is to say, how well predictors predicts the outcome variable depends on the multiple regression model with colinearity, but it may not give valid results about any individual predictor, or about which predictors are redundant with respect to others. Regression analysis assumes that there is independence between independent variable so as to clearly see the effect of them on the dependent variable and multicollinearity test tries to find out if the variables are indeed independent or not. Multicollinearity problem come when VIF"s value is more than 5 as required by the multicollinearity test. In this study no variable was found to have VIF"s value greater than 5 as they are all less than 5 meaning our model does not suffer multicollinearity (ICT Integration=3.49, Motivation=4.61, and ICT Usage=2.49).

4.4. Teachers' responses from the interview

Most of the teachers acknowledge that ICT in the teaching and learning process is a vital issue that must be taken seriously since we have gone past the age where teaching must be restricted to the classroom and the chalk and board method. All the teachers responded they have personal computers but when asked about what they use it for, different responses came up. Majority of the teachers responded that they use it for research, communicate with colleagues and for lesson preparation. Some commented;

"*During the weekends at home, I usually search for social studies related PDF articles. I go through articles so as to help me improve my knowledge in a particular topic. So basically, I use my computer to study at home and enrich myself with information*".

Another teacher said;

"I usually use ICT tools for research purposes to compliment my lesson notes. I add information gathered from the internet to my lesson plan contents and share with my students so we are abreast with current information in our subject area".

Five (5) of the teachers said they find ICT as inappropriate in their subject area. Emphasizing on the traditional instructional method of chalk and chalkboard, they explained that they saw no need of using ICT in teaching some practical lessons as it demands step by step processes which are more suitable or better understood when the chalk and board are used.

Teachers' ICT knowledge as well as their skills and competencies were investigated. Understanding why some of the teachers were active in using ICT tools in their classrooms and others using it indirectly, teachers were asked to explain the kind ICT related training in their subject area, they undertook. From their responses, it was clear that most of the teachers have taken just basic ICT training on how to operate ICT tools during pre-service and in-service training. Also, most of the teachers who are making active use of the tools responded that their skills and competency in the utilization of these tools came as a result of

personal efforts they took out of their working hours for their personal development. It was later found that the delegation of secondary education organizes seminars on ICT, but it was not compulsory for all teachers to attend. Those teachers that participate explained their frustration in that the in-service training they took did not help them in their subject area explained that the in-service training they received did not help them in their subject area. As a result, many admitted not having enough knowledge to integrate ICT in their subject area. From the general view, it was visible from the various responses that these trainings were focusing more on technological knowledge rather than pedagogic technological knowledge.

Almost eight (8) teachers complained about how these in-service trainings organized did not help them much in integrating ICT in their subject area. This is evident in from some of their comments:

"*After graduating from the College of Education with some basic ICT skills, seminars are being organized every year by the Regional delegation of Secondary Education to train teachers of the subject and update them on syllabus changes. These training are specifically for teachers of ICT as a subject. On a general note, other seminars are being organized to train teachers on basic computer skills. But most of the time these trainings do not help teachers in integrating ICT in their subjects".*

Another teacher said:

"In the first place, our school program and curriculum do not allow for the use of these tools. We attend seminars, but not a single one have we been taught how to integrate ICT in social studies lessons. Most of the symposium I have attended, teachers were just trained on some basic computer skill."

On the contrarily, some teachers express satisfaction with the trainings they had but emphasize that it helped them in improving their technological knowledge but not knowledge in using the tools to teach their subjects, one of the teachers noted;

"I have received in-service training under the Regional Delegation of Secondary Education and also equally not long ago under one non-governmental organization. After undergoing these trainings, I became efficient in browsing and using the net for research on lesson content. So I think that training was a key to my current skills on the internet".

The teachers admitted that the seminars did not help them in their subject areas and so they could not make practical use of the tools in the classrooms even when they got the opportunity to use them. Consequently, they admitted not having sufficient knowledge to use ICT tools effectively in their classroom. Some of the teachers who were competent enough to use the tools in the teaching and learning process admitted that most of what they know came as a result of their interest in the ICT tools and the ability to work collaboratively with other ICT competent teachers.

One of the teachers noted;

"I am able to utilize ICT tools mostly due to my personal effort and sometimes I asked help from colleagues who are more ICT competent".

Another teacher explains:

"I can say most of what I know about ICT comes as a result of the optional courses I took from my university education and also my personal effort because I believe in professional development".

On the question of whether students have sufficient ICT skills to be able to use ICT in the classroom, six (6) teachers mentioned the fact that, it nearly impossible to use the ICT tools in their lessons since some of the students did not have the basic ICT skills to utilize the ICT tools. On responding to power supply and internet connectivity, ninety percent (90%) of teachers said their schools had power supply but it was on and off and also internet connectivity was very slow. And hence, ICT usage is always interrupted by power cut off.

A teacher sadly said;

"Poor internet connections, frequent power outage coupled with, huge class size with no proper space arrangement for movement. All of these add to the difficulties that go with using ICT in the classroom".

It was evident from teachers‟ response that access to ICT facilities was limited. Whiles some were given full access to computer labs, other teachers complain that they were not given similar access to these facilities. Also, some complained that there were not enough ICT tools in the school. Others made mention of the fact that classrooms were not well equipped with these tools, thus making integration of ICT in their teaching difficult. These are some of the arguments put forward by some teachers;

"When I have lesson at classes with large size, I'm supposed to use a projector to ensure effective teaching; it becomes very frustrating when the only projector in the school is been used by another teacher in a different class. I'm left with no choice than to use the traditional way of chalk and board".

Another teacher said:

"I can proudly say my schools has computer lab but that is just in name because the ICT equipment there are not in good shape. My school is considered a first class school but can go without internet connectivity for a whole. This makes the use of ICT in teaching very difficult".

One of the teachers also narrates his frustration anytime he has to use the ICT lab;

"The teachers of the ICT subject can have free access to the computer lab anytime but not teachers of other subjects. To send my students to the lab for a lesson, I need to go through a lot of people. From my head of department to the academic head and through the ICT monitor in charge the ICT lab".

Repeated responses from many of the teachers of unequipped ICT classrooms reveal their loss of interest to incorporate ICT in their classrooms. On the other hand, teachers who had the interest in integrating ICT could not effectively use ICT tools because of poor network and lack of electricity in the classrooms. It can therefore be concluded that integrating ICT in these schools will demand significant classroom arrangements to suit the ICT tools teachers intend to use.

5. DISCUSSION OF FINDINGS

5.1. Discussion

This study used ICT integration and motivation to influence social studies teaching and learning effectiveness in Ghana Senior High School. In response to whether or not ICT integration influence social studies teaching and learning effectiveness in Ghana Senior High School, four hypotheses were formulated to check the relationship of the factors on social studies teaching and learning

The first hypothesis of this study states the relationship between ICT integration and Motivation. The findings revealed that there was relationship between ICT integration and Motivation. Teachers and students were found to be enthusiastic towards the teaching and learning process when ICT was involved. According to (Aremu,2014), employing the projector, webcam and other ICT tools in the teaching of students makes the teaching and learning process more interesting and result oriented since students are enthusiastic towards the learning process. (Gardner, Morrison, Jarman, Reilly, & Helena, 1993; Rockman, 1998) stated that specific benefit of laptop integration included increased student motivation and a shift towards more student-centered classroom environments (Rockman, 1998). Coyle, Hood & Marsh (2010) discussed that educational practices should adapt to the cultural demands of those involved such as learners, teachers and the communities. This could be achieved by integrating ICTs in the teaching and learning to increase students' motivation.

The second hypothesis was found to have significant association between Motivation and ICT usage. According to (Goldman, Mayfield-Stewart, Bateman, Pellegrino, & the Cognition and Technology Group, 1998; Lowther et al., 2003) students are motivated to work with computers because they find the activities challenging than ordinary tasks, and the overall learning environment is more meaningful. Hu and McGrath (2012) suggested that teachers' attitude towards the use of ICT can be motivated positively by engaging them with continuous professional development programs that can equip them with new ICT skills.

The third hypothesis found significant relationship between ICT usage and effectiveness or performance. Teachers and students were of the view that using ICT had had a positive impact on their performance or effectiveness in the teaching and learning of social studies. Studies by Becta (2000, 2001a, 2001b) have indicated the enhanced attainment that uses of ICT can bring to schools and to pupils, and a part of this was the recognition of motivational effect. Voogt (2010), said that the frequency of ICT usage has a positive correlation with 21st century pedagogical learning orientation. Teachers who frequently use computer in their daily life are most likely use ICTs in their teaching practices than those who do not use them at all. Voogt (2010) added that additional motivation and incentives to participate in professional development practices especially in the incorporation of ICT in the teaching and learning process should act as a major requirement especially for teachers who are reluctant to change their teaching style.

Finally, the forth hypothesis, there was positive relationship between motivation and effectiveness or performance. Findings from this research show how students' performances in social studies learning have improved because of their interest and enthusiasm in the use of ICT in their learning process. Brand (2003) in a study aimed at comparing students' performance, attendance and satisfaction in history classes that had technology aided medium and that which uses the traditional way of ―chalk and board‖. He found out that students tend to gather more information on their own using the internet. Again, it was found out that students performed better in essay writing activities and works involving the use of ICT. In a similar study by Rovai and Kassop (2001) on the impact of integration of technology into the teaching and learning of social studies, they presented more positive arguments in favor of technology oriented methodology. (Harandi, 2015) observed that when teachers apply e-learning, more motivation is generated by students. According to Afzal, Ali, Aslam Khan, &Hamids (2010) extrinsic motivation and intrinsic motivation have positive impacts on academic performance of students.

6. CONCLUSION, RECOMMENDATIONS AND PRACTICAL APPLICATION

6.1. Conclusions

The following conclusions were drawn out based on the findings from the study.

This study tries to examine the impact of ICT integration in social studies instruction. It is evident from previous chapters in this study that when the right framework are put in place focusing on integrating ICT in the curriculum, then the significant impact is felt in the teaching and learning process. According to the findings from this study, it can be concluded that the performance of teachers and students in their teaching and learning practices has been influenced by ICT integration, usage and motivation.

6.2. Delimitations of the study

This study took place within one region of the country. The study targeted only public Senior High Schools in the Eastern region of Ghana. The study dealt with social studies teachers and students because they play a great role in the teaching and learning process. The respondents were suitable to the study as they were involved in the day to day interaction in the classroom, hence could provide first-hand information or data.

6.3. Limitations of the study

Due to limited time and logistics at the disposal of the researcher, the scope of the study was not widened to other regions of the country; hence findings were not comprehensive enough to be generalized to the whole country. Another limitation was the suspicion with which some of the respondents viewed the study. The initial unwillingness of the school administrators in allowing the researcher to use their institution for the research study and the provision of requested information. The researcher tried to mitigate these limitations by assuring the respondents on the confidentiality of their identity.

6.4. Recommendations

It is recommended that ICT infrastructures and facilities should be provided to the senior high schools for effective integration of ICT in the teaching and learning process since it is the basic stage of equipping the youth with the necessary skills and knowledge for national development. Teachers should be given the necessary training in ICT usage so that they become abreast with modern pedagogy of imparting knowledge and skills, and possible become part of curriculum structure for their professional training. To promote teachers' use of ICT, it is further recommended that; sufficient time per lesson should be allocated to encourage teachers to use various ICTs in their lesson delivery. Classroom structures should be created in such a way that allows for space to use these ICTs. More investment should be directed to moving ICT tools to classrooms instead of equipping only the computer labs of the school; allocating more funds to teachers professional development in ICT skills instead of buying more and more computers each academic year; making in-service training compulsory for all teachers instead of optional; ICTs should be made accessible to all teachers despite their subject area; providing broadband network in the schools with fast internet connection for easy access to internet by teachers and students. A policy should be put in place to enable students acquire computers on hire- purchase. Billing them for their three years period in school could result in all or at least most students having their own personal computers. Also it is recommended that Policy Formulators should be clear with the ICT policy and its direction of implementation with the necessary guide lines so that the implementation agents like Ghana Education Service, Ministry of Finance and the likes can help make a reality since competency in ICT is the modern way of acquiring critical skills and knowledge effective and efficient for economic development.

6.5. Suggestion for further studies

To further extend the literature on ICT integration in the teaching and learning of social studies, the following recommendations for further studies are provided:

A more comprehensive study on the same topic should be conducted on a larger sample size across different regions so that the findings can be generalized for the whole country. Teachers in higher levels of education can be included in the study so as to conduct a comparative analysis of their responses with that of Senior High School teachers.

Again, this study is limited to public SHSs schools in the Eastern region. As a result, I will recommend researchers who are interested in carrying out a similar study to examine the pedagogic use of ICT in private schools as well. More so, a further investigation of the teacher education program should be carried out with the aim of examining the kind of ICT training pre-service teachers are taking and how this training helps them in their profession.

Further research should be carried out to investigate the reciprocal relationship between pre-service and in-service teachers' attitude and beliefs towards the use of ICT in the curriculum. The aim of the study could be to find out their views about beliefs and actual practice of ICT incorporation. This perspective would be more applicable using comparative studies.

6.6. Practical application

After research outcomes showed that ICT integration relate to motivation of students or teachers use of ICT in social studies lessons. It is worthwhile to know ―how to drive students and teachers in the context of ICT usage which requires further research. The problem-oriented at the public SHS in Ghana can contribute to the solution design for improving teaching and learning in Ghana schools with similar problems.

It has been disclosed in this study that ICT integration motivates students and teachers to use ICT in teaching and learning social studies and thus enhance their performance. Provision of ICT tools is imperative for teachers and students frequent usage which is proven for effective teaching and learning of social studies in SHSs in Ghana. Also, if ICT trainings are properly organized with a focused on all subject areas, it will be easier for teachers to use ICT tools effectively in their classrooms.

Policy makers play an important role in achieving ICT integration in SHS in Ghana by distributing equal and adequate resources such as computers, generators and electricity where necessary to ensure smooth and fair integration of ICT into Ghana SHS. The research contributes to improve the current situation of ICT integration and try to enhance teaching and learning gaps.

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