An Assessment of Basic Schools Teachers' Integration of Computer Based Instruction into Social Studies Teaching in West Mamprusi Municipality; Implications for Further Development of Computer Based Instruction Use in Ghanaian Schools

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*Abstract:-*This quantitative study was conducted in West Mamprusi Municipality to explore theintegration of Computer Based Instruction in Social Studies instructional processes among basic schools; opportunities, challenges and implications for policy reforms. The study forms part of an ongoing PhD research which focuses schools preparedness for the integration of Computer Based Instructions in teaching and learning of Social Studies in Northern Region of Ghana. Three research questions and one hypothesis were formulated to guide the study. The research was anchored on the technology acceptance model developed by Davis, Bagozzi and Warshaw, (1989). The correlational research design was employed for the research. The design enabled the researchers to observe two or more variables at a point in time and also useful for describing a relationship between two or more variables in the study. Ten (10) Junior High Schools and 15 primary schools were randomly sampled for the study using proportional allocation formula developed by Yamane (1967). Data were collected by means of structured survey questionnaire constructed with close-ended questions. The questionnaires were pre-testedto ensurereliability using Cronbach's Alpha formula.The questionnaires yielded an alpha of 0.79 which was within the acceptable standard and hence was adopted for the study. Data were analyzed using descriptive and inferential statistics. The t-test was used to test the hypothesis to determine whether there was a significant relationship between teachers' gender, age, experience and location in their application of ICT resources during Social Studies instruction.The findings discovered that teachers' had positive attitudes towards the application of Computer Based Instructions CBIs) as tools for teaching and learning of Social Studies. However, teachers' do not incorporate CBI in instructions due to lack of digital infrastructure, lack of internet, poor teachers' ICT skills, limited time, lack of technical support for the teachers', unstable power supply and lack of school based ICT policies. Teachers' variables such as age, gender, experience and location were found to have significance mean difference on the extent of integration of Computer Based Instruction in instructional processes. This means that the null hypothesis of no influence of teachers' characteristics on their level of CBI integration should be rejected. However, teachers' qualification did not significantly influence the extent to which they incorporated CBI in Social Studies instructions. Based on the findings, the study recommends the Government of Ghana to supply basic schools with appropriate digital infrastructure including internet, in-service training for teachers and increasing budgetary support for schools to operate and sustain the CBI innovation in schools to improve on students' learning outcomes.

Key Words: Social Studies, Teaching and Learning, Gender, Gender Disparity, Computer Assisted Instruction, Cooperative Learning, E-learning, and Computer Literacy.

I. STATEMENT OF THE PROBLEM

Social Studies is the study of human interaction with the physical and social environment with emphasis on individual qualities and group ideals. The subject focuses on producing competent, critical and responsible citizens who will contribute to national development in the spirit of patriotism.The application of Computer Based Instruction, the new innovation in pedagogy has potentials of supporting students improve on their performance with capacity to meet future challenges head on. However, Ghana Education Service Report on the Basic Education Certificate Examination (BECE) performance ranking by MMDA's for the 2017 placed the West Mamprusi Municipal at 211 out of 216 districts. Specifically, candidates' performance in Social Studies was 46.74% which was not good enough. If this trend continue, the Municipality may not be able to meet the Sustainable Development Goal 4 by 2030which focuses on Quality Education for all and lifelong learning.For learners to

improve their performance in the subject, Social Studies teachers need to adopt innovative teaching pedagogy which integrates Computer Based Instruction (CBI).The application of Computer Based Instruction in pedagogy presents a lot of opportunities and challenges. For instance, Kulik's (2014) meta-analysis study cited in Adel &Mournir(2014) discovered that, on the average, students who used CBI scored higher in exams than students who did not. The students also learnt more in less time and liked their lessons more when ICT based instructions were included.Computersupported instruction can enhance the acquisition of knowledge and skills that will empower Social Studies students' lifelong learning. Research on Computer Assisted Instructionhas discovered that the use of computers in learning contributed to increased interaction and reception of information, changed the communication models and the learning methods used by the teachers and gave way to new scenarios which favored collaborative learning (Noor-ul-Amin, 2013). However, gender disparity, a global phenomenon can also be seen in the area of ICT. Wajcman (2006) opines that many feminists believe that technology embodies patriarchal values. Similarly, Todman (2000) concluded that empirical study on computer self-efficacy in general shows that males on average tend to acquire computer self-efficacy faster than females. Significant differences between males and females were observed for technical ICT capabilities and situational and longitudinal sustainability.The current situation demonstrated a persistent gender gap in access and use of digital technologies, in digital skills and in the digital labour market, while women also face certain online risks when engaging with new technologies.The integration of CBI in teaching and learning of Social Studies depend on several factors which can affect the success or the failure of its use. They include teachers and students perceptions of CBI, teacher age, gender, experience and qualification, schools' administrators perception of the CBI, the level of technical support for teachers, teachers ICT skills and the level of training received, among other factors. It is against this background that the research was conducted to examine thelevel of integration of CBI in teaching and learning of Social Studies in West Mamprusi Municipality; opportunities, challenges and implications for policy reforms.

Research Questions

The following research questions were formulated to guide the study:

i) What is the perception of teachers' aboutComputer Based Instruction as toolsfor teaching and learning of Social Studies?
ii) To what extent do teachers incorporate Computer Based Instruction in the teaching and learning of Social Studies?
iii) What challenges do teachers encounter when integrating Computer Base Instruction in the teaching and learning of Social Studies?

Hypothesis

The following null hypothesis was formulated to guide the study.

Ho1: Social Studies teachers' age, gender, and experience do not influence their level of integration of Computer Based Instruction in teaching and learning.

II. LITERATURE REVIEW

Theoretical Framework

Several factors might influence teachers' application of CBI in the teaching and learning process. In order to probe deep into these factors, the study employed the Technology Acceptance Model(TAM) developed by Davis,Bagozzi and Warshaw(1989). The modelpostulated that the user's motivation for any technology adoption is predetermined by three factors namely, perceived ease of use, perceived usefulness and attitude towards using the technology. According to TAM, for the integrationof CBI to be effective and efficient, it needs to make the learners' and teachers' experience a feeling of the technology's usefulness and ease of its use. The more successful the CBI integration in generating positive attitudes in learners towards learning when incorporated in instruction, the better their learning experiences and outcomes. Therefore, technology acceptance model proved to form an appropriate framework for use as a guide to this study. In this study, independent variables such as Social Studies teachers' competency, availability of appropriate digital infrastructure as well as technical support can be grouped on TAM variables of perceived usefulness and perceived ease of use of CBI in instructional processes. In TAM, the extraneous variables are the factors that affect the teacher which come from outside the control of the teacher. They include national curriculum, rapid transformation in society triggered by technology, national ICT policies, school based ICT policies, pressure from students and parents, and the influence of local educational authority. Figure 1 below give illustrations on the TAM.
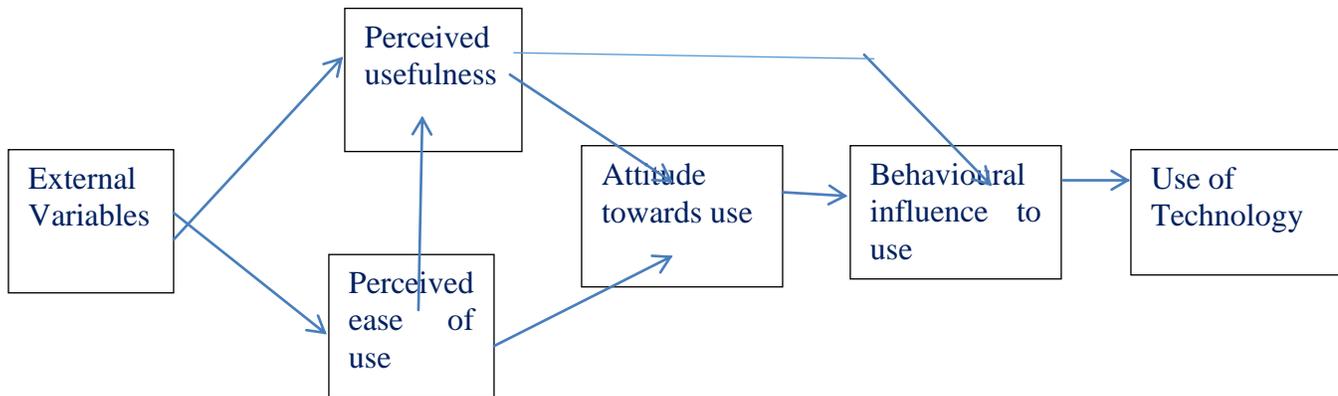
Figure 1: Technology Acceptance Model (TAM) (Davis, Bagozzi and Warshaw, 1989)

There has been a recent increased in number of schools in Ghana employing CBI in teaching and learning.This is creating a significant awareness on the opportunities that could be derived from learning with CBI. This awareness, together with increasing levels of teachers' ICT competencies has made it easy for Social Studies teachers in the study area to incorporate the CBI in the instructional processes to be part of the digital revolution. However, the context could vary from one district or region to the other.

An Overview of Basic Schools' Social Studies Curriculum

Social Studies is the study of man in the society. At the upper primary school level in Ghana, Social Studies is taught as Citizenship Education.It exposes learners to current persistent problems of human survival, equips them with relevant knowledge, skills and desirable attitudes needed in resolving such challenges. In agreement, Martorella (1997) cited in Bariham (2015) postulated that the purpose of social studies is "to develop reflective, competent and concerned citizen".Social Studies curriculum models have been associated with four widelyused models in many countries including Ghana. These include Citizenship Education, Reflective Inquiry, Social Science Structure of Education and Unified Integrated study of society. However, in Ghana presently, Social Studies is generally accepted as Citizenship Education which focuses ondeveloping in learners critical thinking skills for both identifying societal problems and taking civic actions towards solving them.The goal and objectives of teaching Social Studies are many; and varied from country to country depending on the needs, challenges and aspirations of the country. The learners need a different kind of pedagogy if they are to acquire critical thinking skills to enable them become creative problem solvers. The integration of CBI into Social Studies instructions has the potential of helping the learners acquire higher order thinking skills such as comprehension, analysis, synthesis, and evaluation in line with Bloom's Taxonomy of education.

The Concept of Integration of Computer Based Instruction in Teaching and Learning

ICT is the combination of tools and processes that support teaching and learning. The tools refer to the technological innovations including old analogue and new digital technologies. Processes on the other hand refer to the communicative and interactive capabilities enabled by these technologies, especially through the Internet and other network technologies. ICTs can also be viewed as those devices, converged or otherwise, applied in addressing educational needs and problems, and facilitated by both old technologies like the radio, telephone, television, and audio tape; and the newer digitized forms such as computers, internet, mobile phone, and other devices (Ogange, 2011: 16). The overlapping terms related to the uses of computer and associated technologies in Social Studies education are grouped into three. Namely, learning about computers, learning with computers and learning through computers. Learning about computers involves the knowledge of computers at various levels such as knowing the uses of the computer and the names of the various parts, knowing how to use the keyboard and computer packages. The knowledge of computers may be seen as a process which ranges from skills in and awareness of computers at a lower level to programming at a higher level.With Learning with computers, learners use computers as a tool in data collection, analysis, and communication with people, information retrieval and several other ways. Computers are used to enhance interactive activities, to provide immediate feedback, to facilitate the retention of knowledge and to enable the learners from varied background to work at their own pace. CBI integration has several benefits including; increasing access to remote learning resources which would be difficult to access when solely relying on printed textbooks. CBI enhances collaborative learning, provoking learners' curiosity by use of videos, television and multimedia,and foster student-centered learning.Education Statistics reported in 2001 that the more frequently secondary school students reported using CD-ROMs or the Internet, the higher their score was on the

National Assessment of Educational Progress (NAEP) (as cited in Taylor & Duran, 2006). In addition, the students that reported using computers to write reports often had a higher score on the NAEP than students that used a computer infrequently or not at all.

Teachers' Perceptions on the Integration of Computer Based Instructions in Teaching and Learning

The integration of CBI in instruction is significantly influenced by several factors such as the availability of digital infrastructure in schools and classrooms, head teachers', teachers' and students' perceptions of CBI, teachers' teaching philosophy and style of teaching, teachers and learners ICT skills, among other factors. Teachers' perceptions and attitudes are major determinants on the use of CBI in instructional settings. Teachers' attitudes toward the CBIs shape not only their own ICT experiences, but also the experiences of the students they teach. According to Zhao and Cziko (2001) three conditions are necessary for teachers to introduce ICT into their classrooms learning and teaching. Namely, teachers should believe in the effectiveness of technology, teachers should believe that the use of technology will not cause any disturbances, andfinally teachers should believe that they have absolute control over technology. Demetriadis et al (2003) reached similar conclusions when they opine that "training efforts are generally welcomed by teachers but consistent support and extensive training is necessary in order for them to consider themselves able to integrate ICT in their teaching pedagogies" (p. 35). According to Rogers (1995) one of the major factors affecting people's attitudes towards a new technology is related to the features of the technology itself. Rogers pointed out five main features of technology that affected its acceptance and subsequent adoption. They include relative advantage, compatibility, complexity, observability, and friability. Thus, a new technology will be increasingly diffused if potential adopters perceive that the innovation: has an advantage over previous innovations; is compatible with existing practices; is not complex to understand and use; shows observable results; and can be experimented with a limited basis before adoption. Preparing students for lifelong learning in our technological and diverse world demands that teachers incorporate CBI into thelearning experiences of students. However, empirical studies discovered that most teachers'due to plethora of factors do not take advantage of the potential of CBI to contribute to the quality of learning, although they valued this potential quite significantly.

ChallengesTeachers Face when Integrating CBI in Instructions

The success of the integration of Computer Based Instruction in the implementation of a curriculum will varyfrom one place to another and from one class to another depending on the ways it was adopted and applied. Brooks, (1999) noted that many educators perceive computers as just another burden. Other researchers such as Pascopella, (2001) emphasize that

some educators felt that computers served only a recreational function, with learners being allowed, for instance, to play games after computing work. However, Potosky and Bobko, (2001) demonstrated that computer use had a positive impact on teaching and learning.On teachers' ICT skills and their level of integration of CBI in instructional processes, Hakkarien, (2001) analyzed the relations between teachers' skills in using the new CBIs; their pedagogical thinking and their self-reported practices. The results indicated that only a small percentage of teachers had adequate technical ICT skills. Furthermore, Veen, (1993) suggested that lack of initial training of teachers was a serious obstacle to ICT implementation.According to Anderson and Dexter, (2000) cited in Obonyo (2013)unrestricted access to training would amount to effective use of computers if teacher are expected to use CBIin a meaningful way. In this regard, a strong leadership is critical to CBI implementation in teaching and learning in general. However, many leadersand administrators especially in Africa are not ICT literate thought they have gained little experience or knowledge that make them use computers only for basic functions such as word processing and PowerPoint presentations.Cost is another important factor that guides the adoption and growth of CBI application in teaching and learning across schools. Most developing countries especially in Africa are significantly limited by resource scarcity. Even where the relevance of CBI is strongly recognized, budgetary allocation for the development of ICT infrastructure in schools is often inadequate. Mugenda, (2006) pointed out that one of the greatest challenges in ICT use in education is balancing educational goals with national economic realities.Rose and Weil, (1995) observed that lack of time required to successfully integrate ICT into their curriculum is a major obstacle in integration in ICT teaching and learning. This implies that adequate time must be allowed for teachers to develop new skills, explore their integration into their existing teaching philosophies, practices, and curriculum, and undertake necessary additional lesson planning, if CBIs are to be used effectively and efficiently.

Influence of Teachers' Variables on the Integration of CBI in Teaching and Learning

Many different kinds of technology can be applied to support teaching and learning to improve the students learning outcomes. However, the ability of teachers to effectively integrate CBI in their instruction is greatly influenced by several variables such as age, gender, qualification among others. For instance, Bariham (2019) discovered thatthe human rights based, technical and social implications brought by ICTs are not gender neutral. Existing power relations in society determine who benefits from and shapes the content, development and use of ICTs. Human rights, including women's rights, are as important online as they are offline. If gender dimensions of ICT are identified and addressed, technology can be a powerful catalyst for political and social empowerment of women and girls, and a tool to promote gender equality. Gender equality is achieved when women

and men, girls and boys, have same rights, life opportunities and prospects, and the power to shape their own lives and contribute to society progress and development. However, gender disparity has been observed in various fields such as business, education and politics. The World Bank Report (2012) indicated that Girls' school participation is lower than boys' at JHS and SHS levels in Ghana. Since ICT in recent times is gradually replacing the traditional teacher-centred pedagogy in schools; and emphasis has shifted from the teacher to the learner. It becomes imperative that both male and female teachers adopt the use of ICTs in facilitating students learning. The Government of Ghana recognized that accessing and using educational materials for sustainable development will only be possible if the teachers (male and female) have the appropriate ICT competence. To that end, the teachers were appropriately trained. The problem is whether the training given has dovetail into gender equality in the use of ICT among Social Studies teachers in the West Mamprusi Municipality or not.

III. METHODOLOGY

This study was conducted in West Mamprusi Municipality to assess thelevel of basic schools teachers' integration of Computer Based Instruction inSocial Studies teaching and learning; opportunities, challenges and implications for further development and use of CBI in Ghanaian schools. Three research questions and two hypothesis were formulated to guide the study. The correlational research design was employed to collect the data from 25 basic schools randomly selected within the West Mamprusi Municipality. The design enabled the researcher to observe two or more variables at a point in time and also useful for describing a relationship between two or more variables. Ten (10) Junior High Schools and 15 primary schools were randomly sampled to participate the study using proportional allocation formula by Yamane (1967). Informed consent was obtained from the head teachers before data were collected from the teachers for the study. Data were collected by means of structured survey questionnaireconstructed with close-ended questions. The questionnaire was pre-tested to ensure its reliability using Cronbach's Alpha formula. Data were analyzed using descriptive and inferential statistics. The frequencies were used to analyze data on Social Studies teachers perceptions towards CBI, the extent of integration of CBI in their instructions, and challenges encountered. The t-test was used to test the hypothesis to determine whether there teachers' variablessuch as age, gender, experience and location of schools significantly influenced their application of CBI in Social Studies instructions.

IV. RESULTS AND DISCUSSION

This section presents the findings, interpretation and discussion of the study. The discussion of the findings of this

study are presented in tandem with the research questions formulated earlier to guide the study.

Research Question 1: What is the perception of Social Studies teachers' about integration Computer Based Instruction in teaching and learning of Social Studies?

The respondents were asked about their on CBI integration in Social Studies instructional processes. The informants were toindicate the extent to which they agreed or disagreed with each of the following statements:SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree. These statements were in the questionnaire designed with 5 points Likert scale. Table 1 gives detail illustrations.Results from Table 1 shows that, 64 teachers 97% agreed to the statement that Computer Based Instruction (CBI) offers rich environment within which to create activities for students learning, whereas 2 teachers representing 3% were neutral. On the statement that CBI is good for teacher lesson preparations and not for classroom teaching, 28 Social Studies teachers representing 24.4% strongly disagreed, 26 respondents representing 39.4% disagree, 8 teachers representing 12.1% were undecided and 4 teachers representing 6.1% agreed to the statement. By implication, majority of the Social Studies teachers disagreed with the assertion that CBI is useful for lesson preparations and not for instructions. Again, CBI provides valuable facilities to support teaching and learning of Social Studies, 14 teacher representing 21.2% agreed to the statement, whereas 52 respondents representing 78.8% strongly agreed. This implies that majority of the teachers believe that CBI offers valuable facilities to support Social Studies instructions. CBI helps learners and teachers to access authentic and current information in Social Studies. 12 teachers depicting 18.2% agreed to above statement and 54 teachers representing 81.8% strongly agreed. This therefore suggest that majority of the teachers accepted the fact that CBI helps teachers and learners to access authentic and current information on issues in Social Studies. Integration of CBI in teaching enables learners develop the spirit of team work, 2 respondents 3.0% disagreed, 4 teachers representing 6.1% were undecided, 14 teachers 21.2% agreed and 46 informants 69.7% strongly agreed to the assertion. This means that majority of the Social Studies teachers 90.9% agreed to the assertion that Computer Based Instruction enables learners to develop the spirit of team work. I will like to learn more about the integration of CBI in Social Studies instruction, 2 teachers 3.0% disagreed with the statement, whereas 64 informants 97% agreed to the statement. By implication, majority of the respondents are willing to participate in teacher training programmes to build their capacity for the effective implementation of CBI in teaching and learning processes.

Table 1: Teachers' Perceptions about the Application of CBI in Social Studies Instruction

Integration of ICTs in the Teaching and Learning of Social Studies	SD 1	D 2	N 3	A 4	S A 5
Computer Based Instruction (CBI) offer rich environment within which to create activities for students' learning.	0 (0.0%)	0 (0.0%)	2 (3.0%)	10 (15.2%)	54 (81.8%)
CBI is good for teacher lesson preparations and not for classroom teaching.	28 (24.4%)	26 (39.4%)	8 (12.1%)	4 (6.1%)	0 (0%)
CBI provides valuable facilities to support teaching and learning of Social Studies.	0 (0.0%)	0 (0.0%)	0 (0.0%)	14 (21.2%)	52 (78.8%)
CBI helps learners and teachers to access authentic and current information in Social Studies.	0 (0.0%)	0 (0.0%)	0 (0.0%)	12 (18.2%)	54 (81.8%)
Integration of CBI in teaching enables learners to develop the spirit of team work.	0 (0.0%)	2 (3.0%)	4 (6.1%)	14 (21.2%)	46 (69.7%)
I will like to learn more about the integration of CBI in Social Studies instruction.	0 (0.0%)	2 (3.0%)	0 (0.0%)	18 (27.3%)	46 (69.7%)
Integration of CBI is cumbersome and delays my syllabus coverage.	26 (39.4%)	16 (24.2%)	12 (18.2%)	6 (9.1%)	6 (9.1%)
I am unable to Integrate CBI in teaching and learning of Social Studies because of lack of ICTs facilities in my school.	2 (3.0%)	2 (3.0%)	0 (0.0%)	12 (18.2%)	50 (75.8%)
Integrating CBI in my lessons is scaring and hence I am reluctant to adopt it.	26(39.4%)	18(27.3%)	12 (18.2%)	4 (6.1%)	6 (9.1%)
Integration of CBI helps learners acquire critical thinking and creativity.	0 (0.0%)	2 (3.0%)	2 (3.0%)	8 (12.2%)	54 (81.8%)
CBI enhances cooperative learning	0 (0.0%)	2 (3.0%)	2 (3.0%)	12 (18.2%)	50 (75.8%)
CBI promotes team teaching	0 (0.0%)	2 (3.0%)	4 (6.1%)	14 (21.2%)	46 (69.7%)
CBI helps in the assessment of students' learning	0 (0.0%)	2 (3.0%)	0 (0.0%)	24 (36.4%)	40 (60.6%)
CBI offers opportunity for differentiated instruction	2 (3.0%)	2 (3.0%)	4 (6.1%)	18 (27.3%)	40 (60.6%)
CBI helps learners to learn at their own pace	2 (3.0%)	2 (3.0%)	0 (0.0%)	12 (18.2%)	50 (75.8%)

From Table 1 above, the assertion that the Integration of CBI helps learners acquire critical thinking and creativity had 2 teachers 3.0% disagreed, 2 respondents 3.0% undecided, and 62 teachers 94% agreed to the assertion. This implies that most of Social Studies teachers accepted the fact that CBI can supports learners to acquire critical thinking and creativity which are vital in Social Studies education. CBI enhances cooperative learning, 2 respondents 3.0% disagreed, 2 teachers 3.0% were undecided, and 62 teachers 94% agreed with the above statement. By implication, majority of the teachers attest to the fact that CBI promotes cooperative learning which is very essential in modern education. CBI promotes team teaching, 2 teachers 3.0% disagreed, 4 respondents 6.1%were undecided and 60 teachers 90.9% agreed.CBI helps in the assessment of students learning, 2 teachers 3.0% disagreed, 64 respondents 97% agreed to the statement.CBI offers opportunity for differentiated instruction, 2 informants 3.0% strongly disagreed, 2 respondents 3.0% disagreed, 4 teachers 6.1%were undecided and 58 teachers 87.9% agreed to the statement.CBI helps learners to learn at their own pace, 2 teachers 3.0% strongly disagreed with the statement, 2 respondents (3.0%) disagreed, and 62 Social Studies teachers (94%) agreed. From above

discourse, it was clear that majority of the Social Studies teachers who participated in the study had positive attitudes and perceptions towards the application of CBI in Social Studies instruction. Above findings confirmed Kale and Goh (2011) cited in Cannon (2017) whose quantitative study on teachers' experiences with the internet and their attitudes toward web 2.0 technologies in all middle and high schools in two counties in West Virginia reported positive attitudes toward web 2.0 technologies. Teacher perceptions of technology can be impacted by their self-efficacy of implementation.

Research Question 2: To what extent do Social Studies teachers integrate Computer Base Instruction into their instructions?

This referred to the use of Computer Based Instructions by Social Studies teachers in performing teaching and learning activities with students from lesson introduction to assessment and closure among others. Respondents were requested to rate their frequency of use of certain CBI strategies on a five point Likert scale with choices: Not used (1), Less used (2), Rarely used (3), Moderately used (4) and Mostly used (5). Table 2 below showed details on the extent to which Social Studies

teachers integrate Computer Based Instructions in their instructional processes.Results from Table 2 below discovered that Social Studies teachers do not integrate CBI in their instruction. For instance, application of video and DVDs for demonstrations during teaching of Social Studies, 40 teachers 60.6% not used, 14 respondents 21.2% less used, 2 informants 3.0% rarely used, 2 teachers 3.0% moderately used and only 8

teachers 12.1% mostly used. Above data indicated that despite the fact that the schools were equipped with video facilities by NGO to enable them use them to facilitate learning, majority of the teachers 84.8% do not use the equipment for the intended purpose. More research (qualitative) is needed to probe into factors responsible for the current trend in schools. Table 2 below offered detailed illustrations.

Table 2: The Extent to which Teachers Integrate Computer Base Instruction in Teaching and Learning of Social Studies

Computer Based Instructional Strategies	Not used	Less used	Rarely used	Moderately used	Mostly used
Application of video and DVDs for demonstrations during teaching of Social Studies	40 (60.6%)	14 (21.2%)	2 (3.0%)	2 (3.0%)	8 (12.1%)
Use of radio to support students learn concepts during teaching and learning of Social Studies	60 (90.9%)	4 (6.1%)	2 (3.0%)	0 (0.0%)	0 (0.0%)
Use Spreadsheet to plot a graph during teaching and learning	50 (75.8%)	8 (12.1%	4 (6.1%)	2 (3.0%)	2 (3.0%)
Downloading images from YouTube and using them during teaching and learning process	46 (69.7%)	12 (18.2%)	6 (9.1%)	0 (0.0%)	2 (3.0%)
Use Power point presentation during teaching and learning process	46 (69.7%)	12 (18.2%)	2 (3.0%)	2 (3.0%)	4 (6.1%)
Use of SMART boards during teaching	54 (81.8%)	8 (12.1%)	2 (3.0%)	0 (0.0%)	2 (3.0%)
Use of mobile phones to support students search online for information during teaching and learning process	48 (72.7%)	12 (18.2%)	2 (3.0%)	0 (0.0%)	4 (6.1%)
Adding video clip to power point during instructions	54 (81.8%)	8 (12.1%)	2 (3.0%)	0 (0.0%)	2 (3.0%)
Use of WhatsApp to create a platform for learning	44 (66.7%)	18 (27.3%)	0 (0.0%)	0 (0.0%)	4 (6.1%)
Creating and maintaining blogs or website to support students learning	50 (75.8%)	12 (18.2%)	2 (3.0%)	0 (0.0%)	2 (3.0%)
Application of Computer games in teaching and learning	50 (75.8%)	8 (12.1%)	0 (0.0%)	2 (3.0%)	6 (9.1%)
Application of Computer tutorials during teaching and learning	50 (75.8%)	6 (9.1%)	4 (6.1%)	0 (0.0%)	6 (9.0%)
Application of Computer drills and practice to support students learning	42 (63.6%)	18 (27.3%)	2 (3.0%)	2 (3.0%)	2 (3.0%)
Application of Computer intelligent systems to enhance students learning	50 (75.8%)	6 (9.1%)	0 (0.0%)	4 (6.1%)	6 (9.1%)
Application of Computer simulations to enhance students learning	50 (75.8%)	6 (9.1%)	0 (0.0%)	2 (3.0%)	8 (12.1%)

From Table 2 above, the assertion that the use of radio to support students learn concepts during teaching and learning of Social Studies, 60 teachers 90.9% indicated not used, 4 respondents 6.1% less used and the remaining 2 teachers 3.0% rarely used. This implies that application of radio technology in instruction is unpopular among the teachers. Downloading images from YouTube and using them during instruction, only 2 teachers 3.0% mostly used that strategy. The remaining 64 respondents 97% did not incorporated YouTube in their instruction. Other Computer Based Instruction strategies such as; se Power point presentation during teaching and learning process; Use of Smart boards during Social Studies instruction; Use of mobile phones to support students search

online for information during instructions;Use of WhatsApp to create a platform for learning; and creating and maintaining blogs or website to support students learning all recorded very low or no usage at all. Additionally,Application of computer games in teaching and learning, 50 teachers 75.8% recorded not used, 8 respondents 12.1% less used, 2 informants 3.0% moderately used and only 6 teachers 9.1% mostly used. Application of computer tutorials in Social Studies instruction, 50 teachers 75.8% recorded not used, 6 teachers 9.1% less used, 4 respondents 6.1% rarely used and only 6 teachers 9.1% mostly used. This implies that computer games and tutorials are unpopular among the teachers in the study area. Application of computer drills and practice to support

students learning, 42 teachers 63.6% recorded not used, 18 respondents 27.3% less used, 2 teachers 3.0% rarely used,2 teachers 3.0% moderately used and 2 informants 3.0% mostly used the strategy in their instruction.Application of computer intelligent systems to enhance students learning, 50 teachers 75.8% recorded not used, 6 respondents 9% less used, 2 informants 3.0%moderately used, and only 8 teachers 12.1% mostly used that strategy in their lessons. Finally, Application of computer simulations to enhance students learning, again 50 teachers 75.8% recorded not used at all, 6 respondents 9.1% recorded less used, 2 teachers 3.0% moderately used and only 8 teachers representing 12.1% recorded mostly used. From above data, it can be concluded that majority of Social Studies teachers in the sampled schools do not integrate CBI in their instructional processes. Above findings concur with Ngatia (2015) whose study on schools preparedness for ICT integration in Kenya concluded that teachers were found to integrate ICT in teaching and learning and other related duties but to a small extent that varied from one teacher to the other with some teachers not using ICT for in teaching and learning at all. In contrast, a study by (Taylor & Duran, 2006) at the University of Michigan-Dearborn took a closer look at teaching Social Studies with technology and how it affected instruction in the classroom. The findings discovered that most Social Studies teachers were using technology to enhance and impact student learning. They reported afterwards that their students exuded more interest in doing research and increased their motivation. They also felt that they were better equipped to teach using technology than before. Maybe as a country, we can learn from this best practice.

Testing of Hypothesis

The results of the study include analysis of the background characteristics of Social Studies Teachers as shown in Table 3. The background variables discussed includedteachers' age, gender, experience, qualification, and location of schools sampled for this study. Table 3 presentsthe number of observation (N), the percent, mean score for integration of CBI, the standard deviation, and standard error of the mean. Table 3 below provided detailed illustrations.

Table 3: Group Statistics on the Extent of Integration

Variable	Variable Category	N	Percent	Mean	Std. Deviation	Std. Error Mean
Age	Young	25	37.9	28.56	13.98	2.79
	Old	41	62.1	18.73	4.17	0.65
Gender	Male	31	47.0	28.23	12.25	2.20
	Female	35	53.0	17.34	3.58	0.61
Experience	Inexperienced	35	53.0	26.83	12.34	2.09
	Experienced	31	47.0	17.52	3.05	0.55
Qualification	Low	50	75.8	22.96	11.06	1.56
	High	16	24.2	20.88	7.49	1.87
Location of School	Rural	32	48.5	17.13	2.87	0.51
	Urban	34	51.5	27.47	12.14	2.08

From Table 3, among the 66 respondents' studied, 37.9% were young teachers with a mean score of 28.56. On the other hand, 62.1% were old teachers who had a mean integration score of 18.73 with a standard deviation of 4.17. The respondents also consist of male and female teachers. From Table 3, 47% were male teachers who had a mean integration score of 28.83 and a standard deviation of 12.25. The female teachers who constituted 53% had a mean score of 17.34 with a standard deviation of 3.58. Analysis of the influence of teachers' background characteristics on their level of integration of CBI was done using the independent t-test. The results in Table 4 show the variables, t test values, degree of freedom (df), significance (P-values), mean difference, the standard errors of the mean and the confidence interval of the difference. From the table, the Social Studies teachers' variables such as age, gender, experience and location of the schools were found to have significance mean difference in the extent of CBI integration. This means that the null hypothesis of no influence of teachers' characteristics on their level of CBI integration should be rejected. However, teachers' qualification does not significantly influence their extent of integration of CBI in the teaching and learning of Social Studies. Above findings.

Table 4. T-test of Impact of Teachers' Variables on CBI Integration

Variable	t-test for Equality of Means						
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Age	4.22	64	0.005	9.828***	2.328	5.18	14.48
Gender	5.02	64	0.001	10.883***	2.167	6.55	15.21
Experience	4.08	64	0.003	9.312***	2.279	4.76	13.87
Qualification	0.70	64	0.485	2.085	2.968	-3.85	8.02
Location	-4.69	64	0.000	-10.346***	2.204	-14.75	-5.94

***Significance at 1%

From Table 4, the mean difference between young and old teachers' integration of CBI in their teaching and learning of Social Studies is positive and significant at 1% (P-value < 0.01). This means that young teachers integrate CBI more than the old ones. The results also indicate that the mean difference in gender, experience, and location are also significant at 1% (P-values < 0.01). In terms of gender, male teachers integrate CBI in their teaching than their female counterparts and for experience, the inexperience teachers integrate CBI in teaching than the experience ones. Analysis of teachers' integration by their location in rural and urban schools revealed a significant mean difference of -10.346. This means that teachers in schools located in rural areas are unable to integrate CBI in their teaching and learning as compared with their counterparts in the urban schools.

Research Question 3: What challenges do teachers encounter when using Computer Base Instructions in teaching and learning of Social Studies?

To determine the challenges teachers faced when using CBI in their instructional processes, respondents were asked toindicate the extent to which they agreed or disagreed with each of the following statements.SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree. These statement were on the questionnaire designed with 5 points Likert scale. Table 5 gives detailed illustrations on the challenges teachers faced in using Computer Based Instructions.

Table 5: Challenges Teachers Faced when using CBI in Social Studies Instructions

Challenges of Integration of ICTs into the Teaching and Learning of Social Studies	SD 1	D 2	N 3	A 4	SA 5
Inadequate number of computers in the school.	4 (6.1%)	0 (0.0%)	2 (3.0%)	6 (9.1%)	54 (81.8%)
Lack of internet in the school.	4 (6.1%)	2 (3.0%)	0 (0.0%)	14 (21.2%)	46 (69.7%)
Insufficient number of projectors in the school.	2 (3.0%)	2 (3.0%)	0 (0.0%)	6 (9.1%)	56 (84.8%)
Lack of technical support for teachers.	2 (3.0%)	2 (3.0%)	2 (3.0%)	16 (24.2%)	44 (66.7%)
Limited ICT skills among teachers and students.	4 (6.1%)	2 (3.0%)	0 (0.0%)	22 (33.3%)	38 (57.6%)
Lack of relevant digital content to support the integration of Computer Base Instruction.	4 (6.1%)	2 (3.0%)	0 (0.0%)	20 (30.3%)	40 (60.6%)
Insufficient time for integration of Computer Base Instruction into teaching and learning process	6 (9.1%)	4 (6.1%)	0 (0.0%)	16 (24.2%)	40 (60.6%)
Pressure to prepare students for exams.	6 (9.1%)	6 (9.1%)	0 (0.0%)	16 (24.2%)	38 (57.6%)
Lack of teachers interest to integrate ICT into their instructions	8 (12.1%)	8 (12.1%)	6 (9.1%)	10 (15.2%)	34 (51.5%)
Lack of support from school management.	4 (6.1%)	0 (0.0%)	10 (15.2%)	14 (21.2%)	38 (57.6%
Inappropriate teacher training on Computer Based Instructions.	6 (9.1%)	4 (6.1%)	0 (0.0%)	18 (27.3%)	38 (57.6%)
Lack of school ICT policy to direct the integration process.	4 (6.1%)	4 (6.1%)	0 (0.0%)	10 (15.2%)	48 (72.7%)
Insufficient professional teachers	10 (15.2%)	4 (6.1%)	6 (9.1%)	12 (18.2%)	34 (51.5%)
Unstable electricity supply	10 (15.2%)	4 (6.1%)	6 (9.1%)	10 (15.2%)	36 (54.5%)
Lack of funds to purchase and maintain ICT resources in the school.	4 (6.1%)	2 (3.0%)	0 (0.0%)	0 (0.0%)	60 (90.9%)

From Table 5 above, it was observed that teachers ranked the various constraints of incorporating CBI in teaching and learning. 60 Social Studies representing 90.9% ranked inadequate number of computers in schools;lack of internet in schools;insufficient number of projectors;lack of technical support for teachers; limited ICT skills among teachers and students; and lack of funds to purchase and maintain ICT resources in schools as the biggest challenges they encounter when using CBI in teaching and learning. 58 respondents 87.9% selected lack of school ICT policy to direct the integration process as the second most pressing challenge.Insufficient time for integration of CBI into teaching and learning process was the third challenge according 56 respondents 84.9%. The least pressing challenge according 44 informants 66.7% was lack of teachers' interest to integrate CBI into their instructions. This implies that although teachers have interest in the integration of CBI in their instructional processes, they limited by insufficient skills and digital infrastructure in their schools to support them incorporate the technology to enhance effective teaching and learning. The above findings confirmed Wang (2008) whose study on "the Difficulties and Challenges of Teachers' Integrating Computer Assisted Instruction into Teaching concluded that insufficient digital infrastructure, negative perceptions of head teachers' teachers' and students' toward CBI, limited ICT skills among teachers and students and limited governmental support as barriers to the integration of CBI in teaching and learning.

V. CONCLUSIONS

Based on the findings, the following conclusions were drawn

1. Majority of the Social Studies teachers who participated in the study had positive attitudes and perceptions towards the application of CBI in Social Studies instructional processes.
2. Most of the teachers in the sampled schools do not integrate CBI during Social Studies lessons due to several constraints.
3. Teachers' variables such as age, gender, experience and location of the schools were found to have significance mean difference in the extent of CBI integration. This means that teachers' demographic variables significantly influenced their level of integration of Computer Based Instruction during teaching and learning.However, teachers' qualification did not significantly influenced their extent of integration of CBI in the teaching and learning of Social Studies.
4. Inadequate number of computers;lack of internet;insufficient number of projectors;lack of technical support for teachers; limited ICT skills among teachers and students; and lack of funds to purchase and maintain ICT resources in schools were cited as the biggest challenges teachers encounter when using CBI in teaching and learning. The least

pressing challenge according to the respondents waslack of teachers' interest to integrate CBI into their instructions.

VI. RECOMMENDATIONS

Based on the findings, the study recommends the following:

1. The Government of Ghana through the Ministry of Education should supply all basic schools with digital infrastructure such as computers, laptops, internet, smart boards, and TV sets to enable teachers integrate CBI to improve students learning outcomes.
2. Ghana Education Service should organize periodic in-service training programmes for basic schools teachers to build their capacity. This would enable them to effectively incorporate CBI in their lessons to improve on students learning.
3. Government of Ghana through the Ministry of Education should supply all female teachers with laptops to help bridge the gender digital gap.
4. Ministry of Education should hire ICT experts for all basic and senior high schools so they can provide support to all teachers during planning and implementation of CBI in the teaching and learning.
5. Adequate budgetary support should be given to all schools to support them plan and sustain the implementation of technology in teaching and learning to improve the quality of education in the country.

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