INTEGRATION AND USAGE OF ICT BY SOCIAL STUDIES TEACHERS IN TEACHING IN JUNIOR HIGH SCHOOLS IN THE GOMOA WEST DISTRICT OF GHANA

1 Robert Andrews Ghanney and 2 Linus Mwinkaar
Department of Basic Education, University of Education, Winneba, GHANA

ABSTRACT: The study focused on Social Studies teachers’ knowledge and usage of ICT in teaching Social Studies in Junior High Schools in the Gomoa West District of the Central Region of Ghana. The study was hinged on Technology Acceptance Model and used concurrent triangulation design within the mixed method approach. Census sampling was used to select all the 77 Social Studies teachers and purposive sampling was used to select 5 out of the 77 for the study. The study used questionnaire, semi-structured interviews and non-participant observations as instruments to collect the data. Descriptive statistics such as frequency and percentages were used to analyze the quantitative data and qualitative data were analyzed thematically. The study’s findings showed that greater number of the JHS Social Studies teachers possess knowledge in ICT, have good perception about ICT integration in teaching Social Studies and are willing to use ICT in teaching. However, only few of the teachers integrated ICT in teaching the subject. This was as a result of inadequate computers and other ICT tools, lack of electricity in schools and some of the Social Studies teachers’ wrong perception about ICT integration in teaching Social Studies. It is recommended that Social Studies teachers be given regular in-service training; be provided with computers and other ICT tools, by the Gomoa West District Education Office. Head teachers, Circuit Supervisors should encourage, motivate and supervise Social Studies teachers to integrate ICT in teaching Social Studies.

KEYWORDS: Integration, ICT, Junior High Schools, Social Studies Teachers

INTRODUCTION

Existing teaching learning activities and delivery system are unsatisfactory and are not suitable for the age of 21st century (Shah, 2016). The Twenty-first-century students are unique, especially with regard to technology. Most teachers are considered digital immigrants; however, their students’ are digital natives. Bennett, Maton, & Kervin (2008) explained that today’s students, or the next generation, are immersed in technology; they have technical skills and learning styles that are not often accommodated with current instructional methodologies. The importance of technology use in education has been widely acknowledged. Many researchers have posited that technology use integrated with relevant teaching methods improves student learning (Hastings & Tracey, 2005; Kozma, 2003). Researchers report that technology cannot only provide authentic, engaging, and collaborative learning environments but also can enable students to learn at any time with peers outside of classrooms (Kozma, 2003). However, to realize fully the benefits of technology in our education system and provide authentic learning experiences, educators need to use technology effectively in their practice. Technology has the potential to move assessment from disjointed separate measures of student progress to an integrated system of assessments and personalized instruction to meet the needs of the learner (U.S. Department of Education Office, 2010). It can integrate more fully student
classroom experiences, homework assignments, and formative and summative assessments, all of which are tied closely to academic standards (U.S. Department of Education, 2010).

Technological change has proven one of the few constants of the early 21st century, providing social studies educators with the challenge and opportunity of preparing digital citizens in a global setting. This requires rethinking the type of social studies learning necessary in the 21st century (Pellegrino & Hilton, 2012). Research shows that computer and Internet supported teaching strategies have crucial roles in facilitating the development of students’ critical thinking, problem solving and decision making skills (Berson, 1996; Rice & Wilson, 1999). In this sense, social studies teachers should be more aware of the changes technology has brought to modern society and try to reflect this change in their own classrooms (Berson, 1996). Social Studies’ integrative nature, its exploration of the human experience across time and place, and its commitment to readying youth for life in a democratic society within a global context means the field is well suited to enable youth learn with and about technology (National Council for the Social Studies, 2008).

Unfortunately, social studies curricula have not been largely affected by this technology change and technology's unique role in the enhancement of social studies education is not widely recognized (Martorella, 1997; White, 1997; Whitworth & Berson, 2003). Technology has typically been assimilated into existing roles and functions of social studies instruction, and little in the way of transformations of teaching and learning occurred during the formative period of its use (Cuban, Kirkpatrick, & Peck, 2001). Social studies is regarded by many students as boring and dry (Chiodo & Byford, 2004). The use of only one teaching style, day after day, denies students the opportunity of learning via a variety of teaching techniques (Siler, as cited in Russell & Waters, 2010). According to Pellegrino and Russell (2008), students are aware of the lack of challenging content and mundane methodologies utilized in social studies classes and so desire a more engaging curriculum. Social studies educators must teach with and about the latest technology to give their students the knowledge, skills, and attitudes required to be able to assume ‘the office of citizen (NCSS, 2013). Berson (2000) has argued that, there has been a shaky relationship between social studies and technology. While some educators have been fascinated by the potential of technology to enhance teaching and learning, many schools have lagged behind in assimilating technology into instruction.

Similar to Becker's finding, other research has shown that social studies teachers lag behind other subjects’ teachers in the adoption of innovative teaching methods provided by technology and approaches related with technology (Anderson & Becker, 2001; Atkins & Vasu, 2000; Dawson, Bull, & Swain, 2000; Education Testing Service, 1997; Office of Technology Assessment, 1995). Thus, social studies educators confront a digital divide between the realities of their classrooms and their students' world. Shaver (1999) expressed doubt that technology will ever incite instructional reform in the social studies, and Pahl (1996) noted that social studies educators have been apprehensive about modifying instruction to incorporate technology. This lingering apprehension has led some researchers to conclude that social studies have not appreciably changed as a result of technology despite anecdotal assurances of substantial progress over time (Diem, 2002; Glenn, 2002; Martorella, 1997; White, 1997).

Literature abounds Social Studies teachers’ knowledge of ICT, Social Studies teachers’ use of ICT and Social Studies teachers’ perception about the use of ICT in teaching in the Senior High schools, Colleges of Education and Universities in parts of Ghana and globally. However, there
is a gap in literature on Social Studies teachers’ integration and usage of ICT in teaching in Junior High Schools in the Gomoa West District of Ghana. Little literature is found on Social Studies teachers’ integration and usage of ICT in teaching in Junior High Schools in the Gomoa West District. The study therefore sought to fill this gap. Thus, added more information to literature on Social Studies teachers’ integration and usage of ICT in teaching in Junior High Schools in the Gomoa West District.

It is anticipated that the findings of this study will help in obtaining contextual data to shed more light on Social Studies teachers’ integration and usage of ICT in teaching, thereby increase boundaries of knowledge in the field. The findings of the study will assist Educators, stakeholders, the Curriculum Research and Development Division of the Ghana Education Service (CRDD) and serve as a springboard to conduct holistic evaluation of and how they implement the innovations in the classroom.

The study was guided by the following research questions.
1. What is the knowledge of JHS Social Studies teachers in ICT in the Gomoa West district?
2. How do JHS Social Studies teachers in Gomoa West district perceive the use of ICT in teaching Social Studies?
3. How do JHS Social Studies teachers use ICT in teaching of Social Studies in Gomoa West District?
4. What challenges are associated with the use of ICT in teaching Social Studies in JHS of Gomoa West district?

METHODOLOGY

The study adopted the concurrent triangulation design within the mixed method approach. Creswell (2014) argues that, in this design, a researcher collects both quantitative and qualitative data, analyzes them separately, and then compares the result to see if the findings confirm or disconfirm each other. In this case, the quantitative data collection and qualitative data collection are concurrent, happening during one phase of the research study. In the study, the population comprised all the seventy-seven (77) Junior High School Social Studies teachers in the district. The researcher used census sampling to select all the 77 Social Studies teachers in the district. A census study occurs if the entire population is very small or it is reasonable to include the entire population.

The researcher then used purposive sampling to select five (5) out of the 77 Social Studies teachers to observe their lessons and then interview them. Creswell, cited in Kusi (2012) has argued that in purposive sampling, researchers intentionally select individuals and sites to learn or understand the central phenomenon.

Instrumentation

Data was collected by means of an ICT integration questionnaire developed by the researcher. The questionnaire was structured but the last part, thus part “D” of the questionnaire had semi-structured items. The questionnaire was divided into four parts, the first part “A” explored the bio data of the respondents, the second part “B” of the questionnaire consisted of a four point Likert scale which involved “4 = Strongly Agree, 3 = Agree, 2 = Disagree and 1 = Strongly Disagree”, which looked at Social Studies teacher’s content and practical knowledge of ICT, the third part “C” looked at their integration and usage of ICT in teaching Social Studies and
the fourth part “D” consisted of open ended questions which explored the challenges associated with using ICT to teach Social Studies.

The researcher conducted a semi-structured interview with 5 Social Studies teachers of the Gomoa West district. This interview guide which contained 7 items was designed by the researcher to explore their perception about the use of ICT in teaching Social Studies. A non-participant observation schedule was carried among the five Social Studies teachers interviewed. Creswell (2009) recommended the use of observational protocol as a method for recording notes. This is to enable the researcher to know exactly what goes on in the classrooms. A maximum of seventy (70) minutes duration was used for each of the observation carried out. The observation was done on Social Studies teachers to ascertain the teachers’ use of ICT in teaching Social Studies. During the observation, an observation check list was used to capture and record important occurrences since permission was not granted for video and audio recordings. The observation allowed the researcher to ascertain Social Studies teachers’ use of ICT in teaching Social Studies. Bell (2005) believed that observation is useful in determining what people actually do or how they actually behave in their context.

Data Analysis
The quantitative data were collected through the ICT integrated questionnaire. Descriptive statistics in the form of frequency counts and percentages were used to analyze the quantitative data with the help of Statistical Product for Service Solution (SPSS) software version 20. The qualitative data obtained from the study were analyzed thematically in order to answer the research questions. Based on the responses to the items, codes were assigned to each item, and themes were identified in the process. The responses were then organized into the themes and analyzed.

RESULTS AND DISCUSSION

Research question 1. What is the knowledge of JHS Social Studies teachers in ICT in the Gomoa West district?

Table 1.1: Social Studies teachers’ knowledge in ICT.

<table>
<thead>
<tr>
<th>Items</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology literacy is the ability to effectively, use technology to access, evaluate, integrate, create and communicate information to enhance the learning process</td>
<td>45</td>
<td>28</td>
<td>3</td>
<td>1</td>
<td>77 100</td>
</tr>
<tr>
<td>Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources</td>
<td>35</td>
<td>38</td>
<td>3</td>
<td>1</td>
<td>77 100</td>
</tr>
<tr>
<td>Technology integration is the use of technology tools in general content areas in education</td>
<td>31</td>
<td>43</td>
<td>1</td>
<td>2</td>
<td>77 100</td>
</tr>
</tbody>
</table>
The six main parts of a computer are Monitor, Keyboard, CPU, Main Memory, Internal Storage, and Power Supply.

ICT tools such as smart phones, computers, Tablets, smart TVs, projector, radio, modem, smart board, scanner, digital camera can be used to teach Social Studies.

Multimedia refers to the marriage of video, sound, graphics, text and images within a single information delivery system.

Map Maker Tool Kit, National Geography 3-D Earth, Google Earth, Encarta encyclopedia are some of the software used in teaching Social Studies.

Technology offer multiple options for lesson delivery.

Results from the Table 1.1, it is observed that, greater number of JHS Social Studies teachers thus, 92.9% agreed to have possessed knowledge in ICT whiles a smaller number thus, 7.1% agreed not to have possessed knowledge in ICT. This is in consonance with Mishra and Koehler’s (2006) assertion who argued that, technological content knowledge is the basis of good teaching with technology and requires that educators understand the representation of concepts using technologies and the knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems that student’s face. They further posited that, a Social Studies teacher needs to be social scientist (problem-solving approach), a knowledge transmitter and a social inquirer to fully navigate his/her technological and content knowledge during teaching and learning process. With regard to the teaching of contemporary issues in the Social Studies, the social inquirer and the social scientist will be more appropriate so that learners will be put at the center of learning to discover solutions to problems themselves.

Research question 2. How do JHS Social Studies teachers in Gomoa West district perceive the use of ICT in teaching Social Studies?

Table 1.2: Interest to integrate ICT in teaching Social Studies

<table>
<thead>
<tr>
<th>Response</th>
<th>F</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>59</td>
<td>76.6</td>
</tr>
<tr>
<td>No</td>
<td>18</td>
<td>23.4</td>
</tr>
<tr>
<td>Total</td>
<td>77</td>
<td>100</td>
</tr>
</tbody>
</table>

Results from Table 1.2 show that, 59 (76.6%) of the respondents indicated that they have interest to integrate ICT in teaching Social Studies, however, 18 (23.4%) respondents responded they had no interest to integrate ICT in teaching Social Studies. The implication is that the Social Studies teachers have mixed interest in relation to integration of ICT in teaching Social Studies.
Social Studies, but a greater number of Social Studies teachers agreed to have interest to integrate ICT in teaching Social Studies.

An interview with some of the Social Studies teachers also revealed their mixed interest to integrate ICT in teaching Social Studies.

T3 stated, “Oh yes, I have the interest to use ICT to teach Social Studies, most of the issues in Social Studies are abstract and the pupils find it difficult in understanding them, but if you use the computer and other tools to teach, the pupils will see and feel the issues. They will understand the issues more.”

T1 stated that, “ICT is interesting and most people are interested in it, yes I will like to use it to teach Social Studies because I know my pupils are interested in ICT too.”

T5 stated that, “even though I can use ICT tools to teach Social Studies, I find it time wasting and I don’t have the interest to integrate ICT in teaching Social Studies. After all, the pupils learn ICT as a subject.”

Research question 3. How do JHS Social Studies teachers use ICT in teaching of Social Studies in Gomoa West District?

Table 1.3: Matrix of use of ICT tools in Social Studies lessons by Social Studies teachers.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Activity</th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
<th>T4</th>
<th>T5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Presence of ICT tool in classroom</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Use of ICT tool in teaching the lesson</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Type of ICT tools used in teaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Computer or Laptop</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Projectors</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Smartboards</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>Smartphones</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>Internet</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Teacher’s knowledge about the use of ICT tool</td>
<td>T1</td>
<td>T2</td>
<td>T3</td>
<td>T4</td>
<td>T5</td>
</tr>
<tr>
<td>9</td>
<td>Right tool being used for the right activity</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Presence of needed skills to use ICT tool to teach</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>Challenges faced with use of ICT tool in the lesson</td>
<td>T1</td>
<td>T2</td>
<td>T3</td>
<td>T4</td>
<td>T5</td>
</tr>
<tr>
<td>12</td>
<td>ability to operate ICT tool affectivity</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>ICT tool functioned properly</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Results from Table 1.3 showed that, out of the five Social Studies teachers’ lessons observed, presence of ICT tool in the classrooms was only noticed in T1 and T4 lessons, T2, T3 and T5 had no ICT tool in their classrooms. However, the Use of ICT tool in teaching a lesson was only noticed in T4’s lesson, even though T1 had a laptop in the classroom, he did not use it in teaching the lesson. The type of ICT tools used in teaching were laptop, projector, smartphone...
for T4’s lesson. The right tool being used for the right activity and presence of needed skills to use ICT tool to teach were present in T4’ lesson. Also, T4 demonstrated ability to operate ICT tool effectivity and the ICT tools functioned properly throughout the lesson. Furthermore, T2, T3 and T5 do not have any ICT tool present in the classroom and so cannot possibly use it or demonstrate any of the attributes that the researcher set to observe. In summary, data in Table 1.2 and Table 1.3 reveal a poor use of ICT tools or ICT integration by Social Studies teachers in teaching Social Studies.

Wilson- Strydom, Thomson & Hodgkinson-Williams (2005) posited that, the adoption and integration of technologies is a challenging and complex process for schools, particularly where there is limited previous experience in the use of ICTs to support teaching and learning. They further maintain that in many schools that have access to ICTs, the focus has tended to be on learning about ICTs rather than learning with or through the use of ICTs.

Research question 4: What challenges are associated with the use of ICT in teaching Social Studies in JHS of Gomoa West district?

<table>
<thead>
<tr>
<th>Reasons why teachers find it difficult to use ICT tools in teaching Social Studies</th>
<th>F</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of or inadequate knowledge and skills to use ICT tools</td>
<td>12</td>
<td>30.0</td>
</tr>
<tr>
<td>Inadequate training to use ICT tools</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>Unavailability of ICT tools in schools</td>
<td>25</td>
<td>62.5</td>
</tr>
<tr>
<td>Time wasting</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40</td>
<td>100.0</td>
</tr>
</tbody>
</table>

From Table 1.4, the data show that 12 (30.0%) of the respondents indicated that lack or inadequate knowledge and skills to use ICT tools make it difficult for them to use ICT tools in teaching Social Studies, 2 (5.0%) stated that they are untrained to use the ICT tools, 25 (62.5%) stated unavailable of ICT tools in schools as a reason that makes it difficult for them to use ICT tools in teaching Social Studies. However, 1 (2.5%) of the respondent indicated it is time wasting in using ICT tools in teaching Social Studies.

Interview with some of the teachers revealed that, though teachers agreed to possess the content and pedagogical knowledge of ICT to integrate ICT in teaching Social Studies, they have difficulties in integrating ICT in Social Studies lesson. For example, T2 stated that, “I have the knowledge in ICT, but I cannot use it to teach because there are not enough computers to use, there are only 6 computers in the school including mine, but the class size is more than 30 students. So how can I use these 6 computers to teach such a large class?”

T1 stated that, “Yes I have a computer and there are computers in the school but no internet. If I am to use the computers and other devices to teach in a Social Studies lesson, I need internet connection but the school does not provide that. I cannot also personally provide internet for the school. When I get all the ICT tools to integrate ICT in teaching Social Studies, then I will do it.”

T3 stated, “as I said earlier, I have the interest to use ICT to teach Social Studies but here is the case the school does not have electricity, and it has been a long time since I went for any in-service training on ICT so how can I use ICT to teach Social Studies?”

Tinio (2002) posited that, the infrastructure challenges that may exist in schools are absence of appropriate buildings and rooms to house the technology, shortage of electric supply and...

ISSN 2056-3620(Print), ISSN 2056-3639(Online)
telephone lines, and lack of the different types of ICTs. Because of this, one need to deal with infrastructure related challenges before the planning of ICTs integration to education systems.

CONCLUSION AND IMPLICATION FOR PRACTICE.

The study revealed that though most of the JHS Social Studies teachers possessed content and practical knowledge in ICT, it appears they still need in-service training and other refresher courses to sensitize them, increase and update their knowledge in ICT integration. Most of the Social Studies teachers have good perception and interest in using ICT in teaching Social Studies but this does not reflect in their actual use of ICT in teaching Social Studies. The question then is, why do Social Studies teachers not use ICT to teach when they agreed to have possessed content and practical knowledge in ICT and are interested in ICT integration in teaching Social Studies? The study showed that JHS Social Studies teachers are faced with inadequate and lack of computers and other ICT tools, and lack of electricity to schools in the bid to integrate ICT in teaching Social Studies hence the reason for their inability to integrate ICT in teaching of Social Studies.

The implication is that, this will distort the intention of Government and educators’ intention to promote the integration of ICT in teaching not only Social Studies but the other subjects as well. This is likely to have adverse effect on teaching and learning in the 21st century where learners are technologically inclined.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:
1. The Government of Ghana, Ministry of Education, Ghana Education Service, the Gomoa West District Education Office, Non-Governmental Organizations and other stakeholders in the Gomoa West District should organize regular in-service training and other refresher courses on ICT for teachers especially Social Studies teachers to increase and update their knowledge.
2. In addition, the same in-service training should be organised by the Government of Ghana, Ministry of Education, Ghana Education Service, the Gomoa West District Education Office, Non-Governmental Organizations and other stakeholders in the Gomoa West District to sensitize, orient and reorient Social Studies teachers about the need and benefits of integrating ICT in the teaching of Social Studies. This could be used to change the wrong perception of some Social Studies teachers about the integration of ICT in teaching Social Studies.
3. Furthermore, the Gomoa District Education Office, Circuit Supervisors and Head teachers of Junior High Schools should encourage, motivate and supervise Social Studies teachers to integrate ICT in teaching Social Studies.
4. It is further recommended that, the Government of Ghana, Ministry of Education, Ghana Education Service, the Gomoa West District Education Office, Non-Governmental Organizations and other stakeholders in the Gomoa West District should provide electricity, internet connectivity, computers and other ICT tools to schools to enable Social Studies teachers integrate ICT in teaching the subject.

REFERENCE


ISSN 2056-3620(Print), ISSN 2056-3639(Online)


