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Renaissance of Social Studies Instruction in the Senior High Schools in Ghana: Technological Perspective

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Abstract
The main purpose of this paper is to position Mishra and Koehler (2006) theoretical/conceptual framework "Technological Pedagogical Content Knowledge (TPACK)" as a contingent solution to the future of Social Studies teaching and learning. This paper is to offer a contingent solution to the Ministry of Education, Ghana, on the challenges of "ICT in Education" and how to boost teacher's ICT/technological competencies, skills and knowledge to ensure maximum utilization of ICTs in education. This position paper recommend that teacher training institutions in Ghana should adopt the theoretical/conceptual framework "Technological Pedagogical Content Knowledge" by Mishra and Koehler (2006) as a course design to enable said Social Studies teachers grasp the requisite competencies and skills to effectively integrate the three knowledge domains (technology, content and pedagogy). Furthermore, this position paper recommend that Ministry of Education, the Curriculum Research Development Division (CRDD), Social Studies curriculum Specialists/Experts, Regional, District as well as Heads of various Second Cycle Institutions should organize periodic technological training and workshops on 21st century teaching and learning methods to enable Social Studies teachers acquire, grasp and possess the needed requisite competencies to effectively integrate technology in education
Keywords: Technological Knowledge, Technological pedagogical Knowledge, Technological Content Knowledge, Technological Pedagogical Content Knowledge

1.0 Introduction

The social studies approach emphasized the holistic integration of nation building content around relevant issues and topics that included environmental concerns, population, attention to attitudes, values, beliefs and the skills of problem solving. Judging from the multidisciplinary content and child-centered pedagogical approaches, researchers conclude that Social Studies stands out as the most appropriate subject for Citizenship Education (Kankam, 2015).

The fundamental concern of Social Studies is with man and his complex relationships with the world around and beyond. It is in this context that the National Council for Social Studies (NCSS) (2010) posits that the Social Studies curriculum attempts to instill in the students; the basic knowledge, desirable values, and skills for investigating, analyzing and explaining these interrelationships. By going through these process the student is taught the knowledge and skills that will enable him/her function effectively in whatever setting they find themselves (Welton & Mallan, 1988).

Gauging from the way modernization, globalization and technology has repositioned the world as an embryonic community, 21st century learners have developed negative attitude and perception towards the subject "Social Studies" as nothing short, then being bull and sterile, packed in content and lacking attractiveness while others viewed it as a rote memorization of facts, date and one's ability to read without any variation and innovation in the way it is taught and learned (Shane, 2008) calling for a stability of the Social Studies curriculum content.

Social studies teacher fail to use innovations and conduct social experiments because such competencies are lacked (Clarke, 2017). Social Studies, as a core subjects in the school curriculum by nature requires learning and the knowledge of students should not be put into a watertight-compartment and that students learning, phenomenon and societal issues be discussed in a multi-dimensional approach. This will help reconstruct the teaching and learning of Social Studies to be more active learning, students centered, more real world learning (competence-based) to better understand real world issues and dynamics.

Recognizing the impact of new technologies on the acquisition of knowledge, the educational sector, curriculum development division, educational institutions as well as teachers must restructure their teaching and learning instructions and classroom facilities to minimize the nexus between the past didactic teaching and the future 21st century teaching and learning approaches. This restructuring process requires effective integration of technologies into existing pedagogy and content in order to provide teachers with the necessary technological pedagogical content competencies and promote meaningful learning among students (Tomei, 2005).

2.0 Statement of Problem

As part of the Government of Ghana's pledge to comprehensively deploy, utilize and exploit the use of technology (ICT), specifically, within the educational sector "a National ICT Policy and Plan Development Committee" was set up in 2002 to formulate ICT policy referred to as "Information and Communication

Technology for Accelerated Development (ICT4AD)" which has seen the light of day since 2004 (Ministry of Education, 2003).

The prospective hurdles was meeting the challenges of education in the twenty-first century. To meet these challenges of education in the 21st, the Ministry of Education (MoE, 2008) formulated a draft policy titled "ICT in Education Policy", policy framework describing how ICTs should be introduced and implemented in second-cycle institutions. As a follow up to this document, MoE conducted a research in 2009 under the theme "eReadiness Assessment of second-cycle institutions in Ghana" (MoE, 2009, p. 22). According to the survey report, the level of teacher's ICT/technological literacy is low and has been identified as a key factor limiting the utilization of ICTs in education. This has affected the smooth and effective integration of technology, subject matter to be studied and the method of teaching and learning within the Ghanaian schools.

As a result, the researcher is projecting Mishra and Koehler (2006) theoretical/conceptual framework "Technological Pedagogical Content Knowledge (TPACK)" as a contingent solution to enable Social Studies teachers grasp and acquire the need 21st century teaching and learning competencies to effectively integrate technology in education by effectively blending technology, subject matter to be learned and the method of teaching and learning.

3.0 Significance of the Paper

The nexus between the past and the future teaching and learning of Social Studies can only be ascertained by exploring 21st century teacher competencies. It is form this backdrop that the present study derives its justification to provide a contingent solution for social studies instruction in the Senior High Schools in Ghana. The review will rekindle the awareness that the didactic method of teaching and learning of Social Studies in the SHSs has and is rendering the subject redundant and not interesting to students and therefore the Ministry of Education and the Curriculum Research Development Division (CRDD) need to integrate innovativeness in planning of the teaching and learning resources, materials, activities and content to make it a functional subject. Secondly, it is envisaged that the review will help Social Studies curriculum specialists/experts to organize technological training programmes on 21st century teaching and learning methods (technology) for Social Studies teachers to enhance their knowledge and competencies. Thirdly, this review will contribute to the limited knowledge on technological integration in the teaching and learning of Social Studies in Ghana and lastly, aid in the adaptation of technological pedagogical content knowledge by Mishra and Koehler (2006) as a yardstick in measuring Social Studies teacher's effectiveness and competencies within Ghana teacher training institutions and colleges.

4.0 Literature Review

4.1 Technology (ICT) Adoption in Education in Ghana

Every aspect of human endeavor has been influenced by technology in this era and it is not surprising that technology has found its way into the educational system. The prospects of using emerging and digital technologies to improve the teaching and learning process as well as student's academic performance have been noted by researchers, scholars, teachers and teacher educators (Clarke, 2017; Lee, Brescia, & Kissinger, 2009). Governments, schools and groups with interest in education have therefore recognized and acknowledged this impact of technology and have invested hugely in technological resources with the hope that technology will facilitate and improve teaching and learning in Ghana.

Existing policy and strategy documents were reviewed in order to bring equity, access and quality which are key priorities of the Ministry of Education. In defining the strategic use of ICTs to achieve developmental objectives for the sector, a number of guiding principles was adopted to influence the policy. According to the Ministry of Education (2008), they were:

a. World Forum on Education Dakar (2000)
b. Report of Educational Reforms in Ghana: Meeting Challenges in the 21st Century (2002)
c. ICT in Education Policy Framework: which highlights key issues and expected benefits of ICTs in Education (2002)
d. The Ghana ICT for Accelerated Development (ICT4AD) Policy (2003) that recognizes education as a cross-cutting issue within the national framework crucial to the support of the thirteen other national pillars.
e. Ghana Education Strategic Plan 2003 - 2015: Volumes I and II (2003)
f. White Paper on the Report of the Education Reform Review Committee (2004).

As part of the Government of Ghana's pledge to comprehensively deploy, utilize and exploitation of technology (ICT), specifically, within the educational sector a National ICT Policy and Plan Development Committee was set up in 2002 to formulate ICT policy referred to as Information and Communication Technology for Accelerated Development (ICT4AD) which has seen the light of day from 2004 (Ministry of Education, 2003).

ICT4AD provided the basis for Ghana's vision for the information age. The ICT4AD document identified 14 priority focus areas and one of the areas was promoting ICTs in education by the deployment and exploitation of ICTs in education. By deploying, the policy is to make accessible and available technological resources, gadgets, application and software that contains the content and enhance teaching and learning instruction. Furthermore, the goal of this policy is to improve teacher's knowledge, competencies and skills through ICT professional training to enable teacher acquire the competencies to effectively integrate technology, pedagogy and content in his/her field of education.

The policy proposed the introduction of ICT as a core subject, the introduction of ICT as an elective subject, the integration of ICTs to support educational management and administrative function as well as the integration of ICTs as a teaching tool for all subject areas. The policy "integration of ICTs as a teaching tool for all subject areas" might transforming the educational teaching and learning through the use of technological resources to enhance content and it's delivery as well as classroom management that stimulates innovativeness, critical thinking and creativity necessary to address challenges of the 21st century society.

5.0 Theoretical framework

5.1 Technological Pedagogical Content Knowledge

The Social Studies teacher exercise an awesome power to recognize and inspire creativity in your students. In the future, the classroom will not be boring or sterile, nor dominated by didactic teaching approaches instead be a place where day after day, year after year, growth fostered through the use of 21st century teaching and learning paradigms. It's not just what the students are doing today, rather what they will be doing tomorrow which can be seen through the lenses of today. By adopting 21st century teaching and learning paradigms, the Social Studies teacher will be helping to unlock and fuel their future of students.

The theoretical framework for this review is rooted in Mishra and Koehler (2006) Technological Pedagogical Content Knowledge (TPACK). Specifically, TPACK has three intertwining knowledge domains being technology, content and pedagogy. Before the inception of TPACK by Mishra and Koehler (2006), Shulman (1986) had developed a conceptual/theoretical framework "Pedagogical Content Knowledge" (PCK). Shulman blended the single knowledge domains content knowledge and pedagogy knowledge to produce a two set Venn diagram with the interception being Pedagogical Content Knowledge. Shulman's PCK had being used by most teacher training institution and educational researchers in assessing teacher's competence and effectiveness.

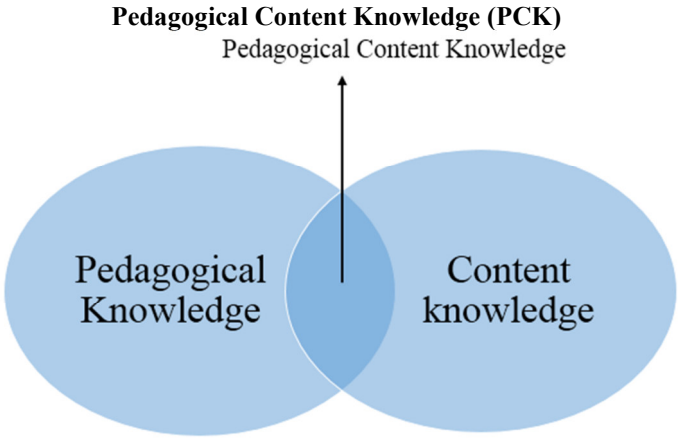

Figure 1: An Illustration of Pedagogical Content Knowledge Model by Shulman (1986:1987)

In going forward and matching into the future, Mishra and Koehler (2006) saw the need to map a theoretical/conceptual framework to meet 21st century teacher competence and effectiveness by introducing the third variable (technology) to Shulman (1987) "Pedagogical Content Knowledge. The amalgamation of technological knowledge, pedagogical knowledge and content knowledge produced a three set Venn diagram with technological pedagogical content knowledge at the very interception (Mishra & Koehler, 2006; 2009).

Figure 2 shows teachers' Technological Pedagogical Content Knowledge for 21st century effective teaching outcomes.

Technological Pedagogical Content Knowledge Framework

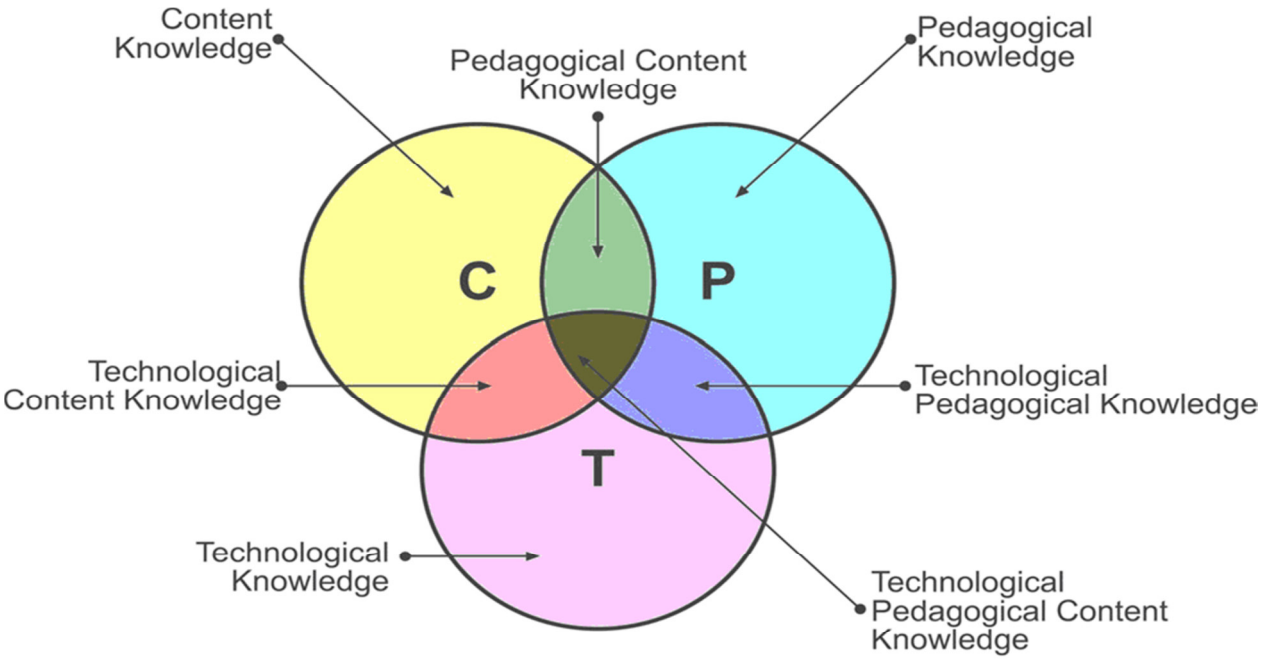

Figure 2: An Illustration of the TPCK Model by Mishra and Koehler (2006)

The technological pedagogical content knowledge highlights seven knowledge domain that will reconstruct teaching and learning. These knowledge include: Content knowledge (CK), Pedagogical knowledge (PK), Pedagogical content knowledge (PCK), Technology knowledge (TK), Technological content knowledge (TCK), Technological pedagogical knowledge (TPK), and Technological pedagogical content knowledge (TPCK).

5.2 Content Knowledge

The syllabus under which the school operate specify the subject matter to be taught and be studied by students. The subject matter of Social Studies engulfs around the problems of society, the culture, its values, ways of life of their society, and hopes for the future (Curriculum Research and Development Division, CRDD, 2007).

Social Studies at the Senior High School level is concerned with equipping the student with an integrated body of knowledge, skills and attitudes that will help the student develop a broader perspective of Ghana and the world. The subject is multi-disciplinary and takes its sources from geography, history, sociology, psychology, economics and civic education, health science, music, anthropology and management (CRDD, 2007). Essential elements, concepts, principles, theories and generalizations from these social science disciplines are integrated into a subject that stands on its own as "Social Studies" with the scope ranging from:. The Environment; Governance, Politics and Stability; and Social and Economic Development (CRDD, 2007).

It is imperative to add that even though the Social Studies syllabus for senior high schools (CRDD, 2007) in some cases the selected body of information and knowledge is quite exhaustive it rather calls for additional or more content to what is already provided to meet the aims of the subject.

5.3 Pedagogical Knowledge

This entails the methods, strategies and techniques of teaching in the classroom. Within the social studies classroom, the approaches used by the teacher to ensure maximum cooperation and participation; effective classroom management to minimize distractors, assessing and evaluating student's performance forms the pedagogy of teaching.

Teaching and learning methods that will enable the learner to develop analytical thinking, reconstruct knowledge to find practical solution to current problems and the acquisition of positive attitudes and values are essential in the teaching and learning of Social Studies at the Senior High Schools in Ghana. Such pedagogical methods includes but not limited to participatory teaching and learning, discussion method, project based teaching and learning and the inquiry method of teaching and learning.

5.4 Pedagogical Content Knowledge

Effectively interweaving of subject matter and methods of teaching and learning in the classroom by the Social Studies teacher enables the learner to grasp, comprehend, reason, transform and reflect on the body of the knowledge presented to him (Shulman, 1986). By this, the Social Studies teacher has minimized classroom distractors, identified areas of difficulty and has come to terms with the affordance and the constraints of curriculum goals; curriculum and educational philosophies; politico-educational policies on the content and pedagogy.

Through effective integration of content and pedagogy, social studies teachers can assess and evaluate learning on topics, problems, phenomena situated to the interests and abilities of students whiles addressing the needs, problems and aspirations of the society.

5.5 Technological Knowledge

Technological/ICT resources abode within the societies and is within the total continuum of 21st century students. These technological resource spans across standardized to advances category (Mishra & Koehler, 2009). Any resources might to make life and human operations easier is a technological resources. Most of these resources are perceived to be purely cooperate orientated but let be in agreement with the novice and say such technological resources such as computers, interactive board, internet, audio, digital video, internet etc can have great influence within our educational enterprise if teachers carefully situate such resources for academic purpose (Martorella, 2001)

5.6 Technological Content Knowledge

The amalgamation of technological resources and information to the prescribed content or subject matter of a course depicts technological content knowledge (Mishra & Koehler, 2006; 2009). The content of Social Studies makes it easier for additional current globalization, modernization and technological affordance and constraints on human survival and relationship with other internal and external phenomena to be discussed.

The researcher is not by any means portraying that these technological resources directly contain the content of Social Studies but indirectly the happens, issues, problems, goals and aspirations of students and the society ranging from Self-identity, Adolescent Reproductive Health, Socio-Cultural Practices, Environmental Challenges in Ghana, Population Growth and Development, Ghana and the International Community, Sustainable Development, Resource Development and Utilization, Problems of Socio-Economic Development and the Role of the Youth in National Development etc are all content areas that demands 21st century information, theories, concept, generalization and knowledge to be able to tackle such content exhaustively.

5.7 Technological Pedagogical Knowledge

The amalgamation of technological resources and approaches to the teaching and learning methods depicts technological pedagogical knowledge (Mishra & Koehler, 2006; 2009). The mode of using technological applications, resources and approaches to ensure effective classroom management, engaging students participation, simulations, promote student-centred teaching to reduce possible distractors is the responsibility of the Social Studies teachers at the Senior High School level. This is because the Social Studies Syllabus (CRDD, 2007) has made recommendation for teachers solicit for additional teaching and learning activities where necessary in order to achieve optimum student learning (CRDD, 2007).

5.8 Technological Pedagogical Content Knowledge

The influx of the three major knowledge domains (technology, content and pedagogy) and the interplay of the sub-knowledge domains (technological content knowledge, technological pedagogical knowledge and pedagogical content knowledge) sum-up to from technological pedagogical content knowledge (Mishra & Koehler, 2006; 2009). Under the thematic area 4 “Incorporating ICT into the curriculum” of the Ministry of Education (2008), they acknowledged the integration of technology/ICT into the teaching and learning process from kindergarten to tertiary level.

5.9 Implications

The competencies that the Social Studies teacher will acquire and gain by integrating technology, content and pedagogy will enable the teacher to enhances the scope of the content and further afford or constraint content delivery through the use of technological resources, information and approaches. This brings the learner in contact to real world scenarios which Partnership for 21st Century Skills (2007) echoes this point by saying “when students realize the connection between what they are learning and real world issues that matter to them, their motivation soars, and so does their learning” (p. 3). This is the future of Social Studies education and the expectations of learners on how the teaching and learning of the subject should be.

Also, the deployment of technology/ICT into education will result in the creation of new possibilities

for learners and teachers to engage in new ways of information acquisition, analysis, synthesis and evaluation thereby improving the quality of Social Studies education delivery (Lee, 2008).

Furthermore, repositioning the teaching and learning of Social Studies, the use of technology/ICT and 21st century teaching and learning will adhere to the Constructivist and the Reconstructionist philosophy of education in which the teaching and learning will be student-centred, encourage discovery of learning by students through hand on activities and present world social issues and events within the classroom.

Moreover, the use of technological/ICT resources and applications in the teaching and learning of Social Studies will foster local and international interaction and cooperation which will enable students to attain a multi-disciplinary approach to people, events and issues (Doolittle & Hicks, 2003). By this, the Social Studies teachers can redirect the traditional classroom into a global embryonic community to enable students acquire 21st century skills.

6.0 Conclusion

Who is a good citizen? A good citizen does not sit down and rest on his or her laurels nor a spectator rather participate in the development of the country through his ideas, support, criticisms, innovations to solve societal problem and meet societal aspiration and needs. Repositioning the teaching and learning of Senior High School Social Studies education through the unification of technology, content and pedagogy will produce effective citizens who will possess the requisite skills, knowledge and competence to participate and function effectively within the society.

The safety and future of our country "Ghana" is more precious than gold or any other infrastructural development because if the citizens are not well equipped with the needed citizenship competencies and knowledge, all things will be in vain. Therefore, the priority of securing our future through the provision of quality education to meet future challenges should be compromised due to finances. Let invest in the future of Ghana through technological/ICT education. To the researcher, this is the future for the teaching and learning of the subject "Social Studies" at the Senior High Schools in Ghana.

7.0 Recommendations

This position paper recommend that teacher training institutions in Ghana should adopt the theoretical/conceptual framework "Technological Pedagogical Content Knowledge" by Mishra and Koehler (2006) as a course design to enable said Social Studies teachers grasp the requisite competencies and skills to effectively integrate technology, content and pedagogy. Also, it is recommended that the Ministry of Education and all its subsidiaries should emphasize and be strict on the integration of technology/ICT, content and pedagogy in the teaching and learning of Social Studies. Furthermore, this position paper recommend that Ministry of Education, the Curriculum Research Development Division (CRDD), Social Studies curriculum specialists/experts, regional, district as well as heads of various second cycle institutions should organize periodic technological training and workshops on 21st century teaching and learning methods to enable Social Studies teachers keep and be abreast with modern methods of teaching and learning.

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