

Understanding the Causes of Students' weak Performance in Geography at the WASSCE and the Implications for School Practices; A Case of Two Senior High Schools in a Rural District of Ghana

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Abstract—The study investigates the causes of students' poor performance in Geography at the West Africa Senior School Certificate Examination (WASSCE) in Ghana. To inform policy and practice on how policymakers, educators, teachers, students and communities/parents could better collaborate to improve teaching and learning, and students' learning outcomes in Senior High Schools in Ghana. The study argues that linking the classroom to students' lifeworlds through practical and fieldwork activities make learning attractive, practical and permanent to students. This is fundamental to improve students' achievements while maximizing relevant educational outcomes for national and community sustainability.

Keywords — Ghana, Senior High Schools, Students' learning outcomes, the West Africa Senior Secondary School Certificate Examinations

I. INTRODUCTION

The West African Examination Council (WAEC), examines Senior High School (SHS) candidates' competencies in at least seven (7) disciplines across different programmes at the end of the 3-year SHS education¹. To serve

¹ Senior High School (SHS) is a 3-year general upper secondary education in Ghana. The SHS curriculum is composed of core subjects, completed by elective subjects (chosen by the students). The core subjects are English language, Mathematics, Integrated Science (including Science, ICT and Environmental Studies) and Social Studies (Economics, Geography, History and Government). Students then choose 3 or 4 elective subjects from 5 available programmes: agriculture programme, general programme (divided into 2 options: arts or science), business programme, vocational programme and technical programme. Geography is an elective subject under the general programme (arts or science). In addition, some aspects of geography are also captured in the Social Studies and Integrated Science core subjects for all students. The SHS ends on a final external exam called the West African Senior School Certificate Examination (WASSCE) organised by the West African Examination Council (WAEC) for students in Ghana, Nigeria and the Gambia (former British colonies- English speaking countries). The WASSCE is graded A1 (Excellent), B2 (Very Good), B3 (Good), C4-C6 (credit), E8 (Pass) and F9 (Fail). The WASSCE serve as the basis for transition to tertiary education and other non-tertiary post-secondary training programmes including enlisting in security agencies. Students are admitted to the tertiary based on their performance at the WASSCE. This should include passing all the four core and at least three elective subjects. The minimum grade for applying to a Bachelor degree programme is at least grade C4-C6 (credit).

as the basis for admissions into tertiary and other post-secondary training programmes in Ghana. The SHS curriculum includes the general programme (Arts and Science) where Geography as a discipline has been clustered. Geography candidates are examined in two main papers at the WASSCE. Paper B1 which is made up of Human & Regional Geography and paper B2 which encompasses Physical & Practical Geography. The annual WASSCE results show that students' performance in Geography as compared with other elective subjects such as Economics and Government is very low. The poor students' performance in Geography at the WASSCE has been highlighted in the annual WAEC Chief Examiners' reports seem to be recurring. Research literature has linked the poor performance to the problem of the seemingly disconnect between theory and practice in the teaching and learning of the discipline (Amoako, 2006; Dakpoe, 2006). Thus the teaching and learning of Geography in Senior High Schools in Ghana is not properly linked to students' lifeworlds or fund of knowledge (Amoako, 2006; Dakpoe, 2006). This gap may have links to the nature and the level of practical or fieldwork experiences that students are exposed to. The level of practical fieldwork activity is also dependent on the supply of resources including a well-stocked geography room/lab, availability of field survey instruments, and other instructional materials. These links are crucial to teaching and learning, and students' learning outcomes. As well as, in eliminating a long-held misconception among some Ghanaian students that Geography is some abstract discipline, hence difficult and too broad to comprehend.

Significantly, Ghana's education curriculum recognizes the importance of Geography literacy to national unity and sustainable development. This is evident in the fact that the discipline as an elective subject has not only survive the numerous educational reforms in Ghana, but some of its aspects also find expressions in the Social Studies and Integrated Science core subjects which are compulsory for all SHS students. Ghana's cultural and environmental diversity, evidenced by the about 100 linguistic and socio-cultural groupings, distributed across three major environmental belts of savannah, forest, and coastal scrubs and grass. Coupled

with three major geomorphological belts including the Voltaian sandstone basin, the coastal low lands, and the escarpment and ridges and the corresponding different generated socio-economic activities across the country further reinforce the importance of geographic knowledge to national development. According to the preamble of the Geography Syllabus for SHSs in Ghana, the contribution of Geography to the education of Ghanaian students finds expression in the communicative, cognitive (mental development about environmental resources, affective (caring and protection of the environment) and the psychomotor (hands-on skills for environmental management) domains. The goal is to promote unity in diversity, citizen formation, national peace and co-existent and sustainable development. To add to the quality of life and enable citizens to contribute to society's welfare. (Ministry of Education (MoE), Ghana, 2010).

However, the perennial poor performance of SHS candidates in the WASSCE is an indication that the national objectives are not being achieved. The general poor students' learning outcomes in Ghana's education system has a correlative relationship with the country's socio-economic development trajectory. Notwithstanding her rich natural resources, modern Ghana is characterised as a developing country, reliant on global trade in the export of raw materials including cocoa, minerals and recently, crude oil. There is very little value addition in terms of processing. The country is, therefore, import-dependent with a huge trade deficit. The economy has not expanded enough to cope with the annual population growth rate of about 2.5 %. Unemployment, poverty and social inequalities are therefore high (GSS, 2012).

This study, therefore, seeks to understand the causes for the low students' performance in Geography at the WASSCE by Senior High Schools (SHSs) candidates. To inform policy and practice on how policymakers, educators, teachers, students and communities/parents could better collaborate to improve teaching and learning, and students learning outcomes in SHSs in Ghana. Especially how to link classroom experiences to students' life world's including local knowledge, environment, culture, resources, challenges and community sustainability (Prosser, 2010). The specific research questions that guide the investigations are as follows:

1. What factors contribute to the low level of students' achievement level in Geography in SHSs?
2. How does the nature of the teaching and learning of Geography in our SHSs relate to the students' performance in examinations?
3. What is the link between theory, practice and students' achievement in Geography?

The significance of the study is to provide a coherent understanding of the major causes for the low learning outcomes and the poor performance of students in Geography at the WASSCE. To inform relevant interventions and practices to improve the quality of teaching and learning in SHSs. This is crucial to improve students learning outcomes

including the excellent performance at the WASSCE. The study might also inform the stakeholders of education about the right supports systems, collaborations and methods that can better connect the teaching and learning to students' lifeworlds and funds of knowledge to make education relevant to local resources challenges, needs and sustainability. Further, the study enhances the awareness level of the crucial role that the geography curriculum play in equipping our students with the requisite affective and psychomotor skills that seem to be lacking in her quest for sustainable development. The study is organised into five sections. Section two deals with the review of related literature on the topic. Section three spell out the methodology. The presentation of the results from the data analysis and the discussion thereof is captured in section four. The study ends with section five that focuses on the summary of the findings and recommendations drawn from the study.

II. LITERATURE REVIEW

2.1 *Evolution of Geography in Secondary Schools in Ghana*

Formal education was introduced in the Gold Coast now Ghana in the 16th Century by merchants and Christian churches from the Dutch, French and English who came for trading and evangelism. The Merchants aimed at training mullato children in basic reading and writing for employment as trade/ administrative assistants or soldiers (Adu-Boahen, 1975; Foster, 2006). Hence, the colonial education curriculum has some basic geographic content on location, directs and calculation distances and zoning areas into natural resources endowment to facilitates trade. The missionaries were also aiming at creating an independent native church with local assistants' staff who could read and write, hence has little Geographic content. Ghana became a British colony following a British proclamation of the existence of the Gold Coast Colony on July 24, 1874. Between 1821 and 1840 the British Crown authorities took control of the education system by financing a few government schools. The focus was on training people to read and write English to facilitate trade and entrenchment of colonial power and culture (Foster, 2006). The curriculum content advanced, to a little extent, the content of the merchants' education system. Yet it was not comprehensive enough. However in 1924 following the colonial government policy led by the then governor for the Gold Coast, now Ghana, Gordon Guggisberg to establish an excellent upper secondary institution in Ghana, the Achimota College was established to provide secondary and teacher training education to the Gold Coast. Geography education, therefore, emerged as a discipline in our Secondary school curriculum (Foster, 2006; Pimpong, 2008).

Just before and immediately after independence in 1957, the first Ghanaian prime minister under colonial rule, and the first president of independent Ghana in 1957, Nkrumah rolled out the Accelerated Development Plan for Education (ADPE) in 1951. The programme saw a rapid expansion of school infrastructure hence access to upper secondary education, teacher training college, Polytechnics and university

education (Adu Boahen, 1975; Kay & Hymer, 1992). This therefore fully established geography as a major academic discipline in secondary and post-secondary institutions in Ghana.

Since then the various educational reforms in Ghana have sought to strengthen geographic knowledge to the country's development. For example, the 1966 Kwabong Educational Review Committee which attempted to revamp technical & vocational education and the improvement of the acquisition of practical skills in school to make education relevant to local needs (Poku, Aawaar, Worae, 2013). This is followed up by the 1987 education which sought to improve the quality of teaching and learning by increasing school hours and teacher professionalism, and its major quest for adaptability or relevance in education. The geographic literacy was deemed important in enhancing relevance and preparing students with varied skills and competencies to play a meaningful role in all sectors of the economy. Hence, priority was given to equipping school with workshops and resources centre to facilitate practical training (Ministry of Education, 1996). In 2004, the government instituted the Anamuah Mensah Educational Review Committee which undertook a comprehensive reform that culminated into the Government of Ghana White Paper on Education Reform. The objective of the reform is to link schooling to the job market through forming alliances with the private sector. (Ministry of Education, 2005). This was also in line with the EFA goals and MDGs where environmental sustainability literacy is seen for local, national and global survival and sustainability. The 2004 reforms thus gave birth to the most comprehensive educational policy strategy in Ghana dubbed the Education Strategic Plan (ESP). The overall aim of the ESP is to provide quality education for skills acquisition, self-actualisation and peaceful coexistence for national development. Geography curriculum in SHS is therefore seen as one of the important avenues of achieving these goals (GoG, 2012).

2.2 Geography Curriculum in High Schools in Ghana

The contribution of Geography education at the Senior High Schools in Ghana finds expression in the communicative, cognitive (mental development about environmental resources), affective (caring and protection of the environment) and psychomotor (hands-on-skills for environment management) domains (MoE, Ghana, 2010). Geography curriculum in SHS thus has a vital contribution to the overall purpose of education. To solve societal problems and further providing critical foundational knowledge in the development of Ghana. Geography education in Ghana is to equip people to understand and adapt to everyday living in the dynamic of the environment (MoE, Ghana, 2010). The study of Geography, therefore, is to enable students to understand geographic facts and acquire an intimate knowledge of the environment and how it is utilized for our development. According to the Geography syllabus for SHSs in Ghana, the discipline is to serve as one of the vehicles or tools for

implementing the national educational objectives at the senior high school level by:

- a. improving the communication skills of students, especially in the areas of describing and evaluating environmental concerns;
- b. providing students with knowledge and understanding of their communities, nation and the world;
- c. developing in them moral values and attitudes for appreciating nature's resources;
- d. equipping students with significant skills to enable them to contribute towards improving on and sustaining the environment, e.g. landscaping (involving tree planting and controlling or managing erosion);
- e. nurturing a generation of people who can think reflectively of others, respect their dignity and values which we as Ghanaians and members of the world community live for;
- f. enabling students to make an honest living in future. This refers to careers in geography that are open to graduate after the course;
- g. fostering national and international unity, a better understanding of different geographical environments, the cooperation of the various ethnic groups in the country toward national growth and development;
- h. acquiring skills for effective organization and utilization of space both in urban and rural environments thereby exposing students to the policies and principles underlying land use practices (MoE, 2010).

2.3 Content of the Geography Syllabus

For purposes of teaching and examining at the Senior High School level, the geography syllabus has been organized into three inter-related branches as follows:

1. Physical Geography (Geomorphology, Climatology and Biogeography): This is the study of landforms, climate, weather, plant and animal life. Physical Geography should be taught and learned with an emphasis on interpreting the physical and human aspects of the subject.
2. Human and Regional Geography: This is the study of human economic activities and their classification on the basis of districts, regions and zones. Human and regional geography should be taught through themes.
3. Practical Geography: This involves the application of skills of map reading, map interpretation (including statistical maps and diagrams), data collection and analysis. It should be taught giving examples from physical, human and regional geography (Amoako-Mensah, 2010).

The contents selected and the divisions adopted are to ensure that students and teachers can actively and effectively utilize the interrelated knowledge in Geography to contribute in developing perspectives on solving the interconnected socio-economic challenges of the nation. The syllabus has been structured to cover the three years of the three-year Senior High School, that is, from grade 10 to 12 (MoE, 2010).

2.4 Profile Dimensions

Profile dimensions describe the underlying behaviours or abilities students are expected to acquire as a result of having gone through a period of instruction. Each of the specific objectives in this syllabus contains an action verb that specifies the type of learning or skill that the student should acquire by the end of the instructional period. Each of the action verbs in the specific objectives of the syllabus describes the behaviours the student will be able to demonstrate after the instruction. Knowledge, application and attitude are the dimensions and the prime focus for teaching and learning, and assessment in schools. In Geography, the three profile dimensions that have been specified for teaching, learning and assessment are Knowledge and Understanding (40%); Application of Knowledge (40%) and Attitudes, Values and Process Skills (20%). Emphasizing the three dimensions in teaching ensure that Geography is not only learnt at the cognitive level but also lead students to the acquisition of positive attitudes and values to enable students to deal effectively with issues in geography and with issues in life in general (MoE, 2010).

2.5 The Geography Paper at the WASSCE

According to the Geography syllabus for SHS, in developing assessment procedures in Geography, there is the need to select specific objectives in such a way that one will be able to assess a representative sample of the syllabus objectives by the end of the school year. Each specific objective in the syllabus is considered a criterion to be achieved by the student. In many cases, a teacher cannot test all the objectives taught in a term, in a year or at the end of the programme. The assessment procedure used must be developed in such a way that the various procedures complement one another to provide a representative sample of the important objectives taught over a period (MoE, 2010). In the light of the above, the West African Examination Council (WAEC), the most widely used examining body in the country, ensures that questions set measure students cognitive, communicative, affective and psychomotor (environmental hand-on) skills. The structure of the WASSCE consists of two main examination papers: Paper B1 and Paper B2. The two examination papers must be taken at separate sittings. Paper 1 has two sections, A and B. Section A is made up of items on general Geography. This is a 50 minutes test consisting of 50 multiple choice questions covering the entire Geography syllabus except elementary surveying. Section B covers elements of Practical and Physical Geography. This section consists of 8 questions to be answered in one hour and fifty

minutes. Students are expected to answer 4 questions. Question 1, which is compulsory, is based on Map Reading and Interpretation. Paper two (2) consists of questions on Human and Regional Geography. This is a two-hour essay-type paper consisting of 3 Sections, A, B, & C. Students are required to attempt 4 questions out of 9 choosing at least one from each section. Paper 1 is marked over 120 marks. Paper 2 is marked over 80 marks giving a total mark of 200 for the two papers. The total number of marks should be converted to 100 for grading. The raw score mark ratio between Paper 1 and 2 is 60:40. (MoE, 2010; WAEC, 2005).

2.6 Factors for students low achievement in School

The first broad conclusions from the literature on student learning and achievement has been that the most significant sources of variation of student learning and learning outcomes is student's background characteristics. This includes family socio-economic status, practices, and expectations, and students' experiences, attitudes and abilities (Bronfenbrenner, 1994; Hill and Taylor, 2004, OECD, 2005). These factors change from place to place and from one culture to the other. This suggests the need for further and contexts specific studies to understand the role of family/community in students learning and academic achievements.

Also, research finding on students learning and school achievement furthest revealed that quality teachers and teaching, and school environment and practices have a direct impact on students' learning and learning achievement (OECD, 2005). Therefore, how, where and content of teachers pre-service and in-service training programmes and how to attract and retain qualified and experienced teachers in under-served areas continue to occupy academic space (Ankrah-Dove, 1982, Ladson-Billings, 1995). In addition, the emerging research on teachers and quality teaching turn to be fixated on teachers' characteristics that are tangible and can be easily measured (OECD, 2005). The gap is on the other characteristics which are hard to measure but may have important impacts on the learning of students. Example how teachers relate to their host communities and their leadership skills to court community support and tap into their resourcefulness and knowledge to pursue relevant pedagogies remains a less traversed area in literature.

Also, findings in research literature suggest that the nature and the implementation process of the school curriculum also has a direct effect on relevant learning and learning outcomes (Marzano, 2003). Kubow & Fossum. (2007), Marxist analyst argues that the extent to which governments can preserve the status quo by monopolising the school's curriculum through standardized curricula, syllabuses and textbooks and the need to maximize relevance through greater devolution of curriculum decisions for communities to have a greater say in what their children learn, is still a lingering issue. In analysing the Finnish education success Kuusilehto-Awale and Lahtetro (2012, p.13) attribute the high students' achievement level and relevant outcomes to political

consensus, devolution of decision making, community participation, inclusiveness, equity and equality evident in the curriculum process. The Finish National Board of Education only issues a National Curriculum Guideline. The grassroots (municipality, the schools with leaders, teachers, parents and students) are empowered to design and apply curriculum that suits their local context. Proponents (Bishop, 2008, Castagno and Brayboy, 2008, Ladson-Billings, 1995) for culturally relevant pedagogy argue for educational decentralization, community participation and community-school collaboration as means to enact relevant school practices or pedagogy to produce students that are: academically successful and globally competitive; culturally and competent; and well equip with hands-on skill environmental management, affective and critical skills for sustainable development (Ladson-Billings, 1995, Wallace and Boylan, 2009).

Also, the literature on education policy research indicates that the gap in education policy is how government policy ought to be negotiated and work especially at the grassroots level. The literature on education policy point to a wide gap between policy text, practice and outcomes (Taylor, 1997); between nationalise educational approaches and community level fund of knowledge (Hattam et al., 2009, Lingard et al., 2003); and among policymakers, practitioners and beneficially community stakeholders, and between home expectations, schools' practices and the policy goals (Castagno and Brayboy, 2008, Kubow and Fossum, 2007, Rizvi and Lingard, 2010). This is so because the issues are complex and contextual and hence require a holistic understanding of the dialectics between the broader geopolitical context and the local geo-social-cultural context at the grassroots level. The challenge in educational research is to contribute to the understanding of these dialectical relationships. To offer insightful and critical explanations from the amalgam of voices of all interest groups, especially those at the school level and communities. This will help to inform the mediation and reconstruction of relevant learning and improve students' learning outcomes.

2.7 Factors that affect students' Performance

The factors the impact on students' performance at the WASSCE have been highlighted in the literature although not extensive. The common include the ability of teachers to complete the syllabus on time (Dakpoe, 2006); the availability of instruction materials and resources rooms (MoE, 2010); the availability of quality teachers; parents' participation (Amponsah et al., 2018); the extent to which students are exposed to practical experiences among others. According to Dakpoe, (2006) the implementation of the Geography syllabus in SHSs shows clear evidence of overloading of content to be taught at each level and a little connection across the content to be taught (Dakpoe, 2006).

Alorvor and Sadat, (2010) also argue that activity-oriented methods of fieldwork, trips and practical exercises in the

teaching and learning of Geography help teachers to engage students group learning to independently explore their environment. Thereby relating whatever students have learnt in the classroom to the reality in their environment. This increases understanding and competencies. However, the insufficient availability of the resources in our SHS is a major stumbling block for quality teaching and learning and better learning outcomes. Dakpoe (2006), also asserts that for students to achieve better performance in geography at examinations, teachers ought to make conscious efforts to involve students in sharing their daily experiences of human-environment relations and encourage students to explore the immediate environments. This is crucial for translating cognitive (knowledge) into practical and positive attitudes. This explains the importance of fieldwork activity in the learning of Geography. This is supported by research findings from studies (Hattam et al., 2009, Prosser, 2010, Wallace and Boylan, 2009, Semke & Sheridan, 2012) in Australia, Canada and the United States where the concepts like fund of knowledge, connecting lives with schooling, place-based education and culturally relevant pedagogy have emerged to explain the relationship between learner' home, school culture and students' school success. This promotes relevant learning and learning outcomes and community sustainability.

2.4.7 The Importance of Instructional Materials and Resources

According to the (MoE, 2010), availability of geography resource room, and instructional materials are very crucial to the teaching and learning of the discipline. A well-stocked geography resources room with globes, assorted map extracts, survey instruments (prismatic compass, chain, tape measure, arrow, ranging poles, global position system) and, digital cameras, computer CDs and videos of various geographical features and events are pertinent to the teaching and learning of the discipline (Dunbar, 2001). The annual Ghana Education Sector Performance Reviews (ESPR) always highlights the problems of the paucity of instructional materials including required government approved texts books as one of the bottlenecks to teaching and learning and learning outcomes in schools in Ghana (ESPR, 2015).

2.4.8 Availability of Quality Teachers

According to the Ministry of Education (MoE), Ghana, at least three teachers are needed per a geography class to effectively to teach the three main branches of (Human & Regional, Physical and Practical) Geography in SHSs. The three branches ought to be taught simultaneously throughout the three years of study. It is envisaged that the simultaneous structure will enable students to be reflective and participate effectively in the teaching and learning process (MoE, 2010). However, the inability of many less-resourced SHSs to maintain quality teachers, especially in rural areas impact negatively on students' performance at the WASSCE.

This section concludes that Ghana's education curriculum admits the role that Geography plays in national peace and sustainable development. However, its implementation has not delivered the full expected benefits. The gap in the research literature is how to reconstruct relevant pedagogy for excellent students' learning outcomes based on the contextual understanding of the causes of students' poor learning outcomes. The next section, therefore, explains the methodology that this study used to investigate the causes of the weak performance of students in geography to inform how to enact relevant learning and learning outcomes.

III. METHODOLOGY

The methodological approach to this study was informed by Wallace and Boylan's (1999) place-based approach to education and Prosser (2010) conception of connecting lives and learning. Both conceptualizations seek to link schooling to the community's culture, environmental resources, challenges and livelihood. To create culturally and socially competent people, local entrepreneurs and society citizens that contribute to community sustainability. The adopted approach to this study thus seeks to link the classroom to students' everyday experiences by immersing both teachers and students into the local environment to discover contextual opportunities, challenges and epistemologies so as to facilitate the enactment of relevant curriculum or pedagogy to improve students' learning outcomes (Hattam et al, 2009; Prosser, 2010). This theoretical underpinning, therefore, influenced my choice of mix method approach and the selection of sites and grassroots participants for the study to understand the current challenges at the school level to inform better practices and interventions that can improve teaching and learning and outcomes.

3.1 Sites

The sites of the study were two SHSs in a rural-dominated district of Ghana. The sites were purposively selected as the study was not only meant for my partial fulfillment for the award of Post-Graduate Diploma in Education, but also to improve teaching and learning, and students' learning outcomes in my school which is one of the two study schools. It thus offered an excellent opportunity for my young teaching professional career journey. A second school which is also in the same administrative district as my school was included in the study for a comparative purpose to elicit wider and intense experiences to enrich the generalization of the findings.

3.2 Participants

The sample population for the study includes all geography teachers, assistant headmasters and geography students from the two study schools. The accessible population of 194 people including the two (2) assistant headmasters (academic), the four (4) geography teachers (two each from the schools) and 188 geography students in both schools were targeted. However, only fifty agreed to participate in the study. They include all four (4) Geography teachers (two each

from the two schools) were purposively selected, the two (2) Assistant headmasters of the study schools were purposively included, and forty-four (44) students from both schools who were in their final year and were preparing to write the WASSCE in the following month also volunteered to participate.

3.3 Methods of Data Collection and Analysis

This study uses mix-method research design. Both quantitative and qualitative approaches were used concurrently and the results were mixed (Creswell & Plano Clark, 2011). The quantitative strand uses descriptive survey complemented by documentary analysis of students' performance in internal and external examinations including my own design and administered teacher-made achievement tests (Bryman, 2012). A survey was used to sample teachers, students and headmasters' perceptions about the problem. The secondary data sources of information from WASSCE and mock examinations results were obtained from the two study schools. The qualitative strand of the study included informal interviews or conversations with teachers and assistant headmasters in charge of academics and two participant-classroom observations, one each, in the two study schools. These helped in offering contextual explanations to the problem. The use of the two approaches thus enriched the data and results and the generalization of the findings.

The quantitative data collected through questionnaire was edited, coded and analysed by using the Statistical Package for the Social Scientist (SPSS) and excel. In addition, the quantitative data from researcher-administered tests and secondary data from students' assessments and examinations reports were computed manually. The results from the quantitative data analysis were displayed in tables and charts. The data from interviews and participant observations were transcribed, coded and summarized in the results and discussions section. These were further embellished by a summative analysis of WAEC Chief Examiner reports.

IV. RESULTS AND DISCUSSIONS

The study set out to investigate the causes of SHSs candidates' poor performance in Geography at the WASSCE to inform policy and practice on how policymakers, educators, teachers, and students could better collaborate to improve the teaching and learning and students' learning outcomes in SHSs in Ghana. This chapter deals with the presentation of the results from the data analysis and the discussions of major findings that emerged from the data.

4.1 Assessment of Students Performance in Geography

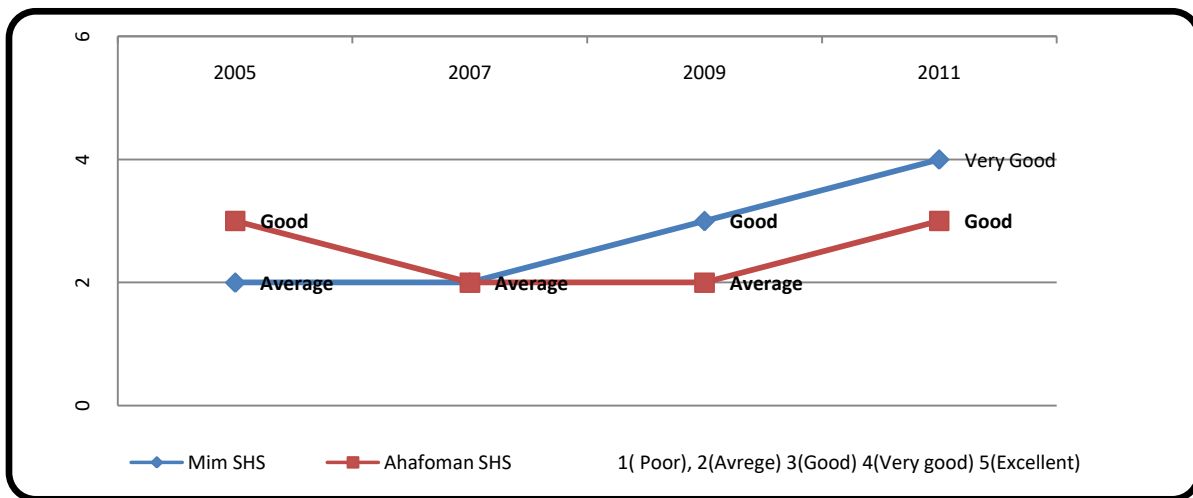
Testing students' learning outcome is the climax of the teaching-learning process. One of the principles of assessment is the use of a variety of procedures to obtain comprehensive information on the students' achievement and progress (Amendahe and Gyimah, 2008). In this study students' performance in both summative (WASSCE and Mock), and

formative evaluations (class assignments and tests), as well as external (WASSCE) and internal (Mock) and researcher-administered tests were used to measure students achievement level in Geography. These were further complemented with class assignments and test, observations and interviews. These provided a holistic picture of students' performance in Geography.

The general trend of students' performance at WASSCE in the study schools over the five year period was examined. In respect to this, the assistant headmasters of the study schools were asked to qualitatively rate students' performance based

on the schools' analysis of the WASSCE results over the past five years. The results as captured in fig 1 show a little above average and somehow stagnating performance of students at the WASSCE. However, MSHS shows better performance than my school-ASHS. This may have a link to the relatively better school facilities (including the availability of science resources centre) in MSHS. The relatively weak and stagnating results affirm The Chief Examiners' Reports (2006-2010) on the WASSCE for the entire country that the performance of candidates remained almost the same as previous years and the majority of students performed poorly in Geography.

Figure 1: The Trend in Students' Performance in Geography at the WASSCE (2005-10)



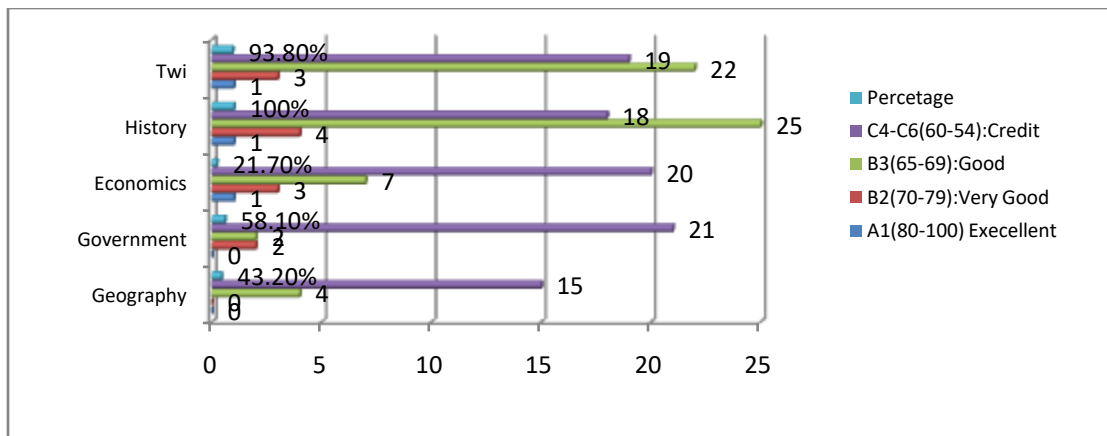
Author's fieldwork: May 2012

Also, to get a fair idea of students' performance in Geography vis-à-vis their performances in the other Arts elective subjects, the 2011 WASSCE results of ASHS, Arts

Department was analyzed and compared. The results as depicted in Fig2 show that students' performances in Twi (Ghanaian Language), History, Economics and Government were better than that of Geography. The results suggest that

students' tend to perform better in subjects that require more reading than Geography which required more practical/fieldwork experiences and mathematical calculations. Thus suggesting insufficient practical experiences in teaching and learning of Geography.

Figure 2 Students' Performance in Geography as against other Electives Subjects at the WASSCE



Author's field survey, 2012

Students' performance in geography in internal mock examinations which is the final internal examinations use to assess the preparedness of students for the WASSCE was also analysed. This is to track if there is a gap in students' performance in internal and WASSCE (external) examinations. The 2012 mock examinations results of the 44 final year students from the two schools were analysed. The results as provided in Table 1 further affirmed the rather weak to the average performance of students in Geography. Majority of the students (66%) attained between D7-F9 (Weak Pass-Fail). The overall performance of students can, therefore, be described as below average. This suggests that students poor performance at the WASSCE cannot be attributed to students' anxieties associated with important examinations, but rather the insufficient preparedness of students. Some of these factors are teacher initiated (conditions external to students), others are internal to the learners, and more still others are both external to the teachers and the learners (conditions in the schools). The factors are further examined below.

Table 1 Performance of Students in Geography in Mock Examinations

Performance	Per cent
B2(Very Good)	4.5
B3(Good)	6.8
C4-C6(Credit)	22.7
D7-E8 (Pass)	34.2
F9(Fail)	31.8
Total	100.0

Authors' construction base on analysis of students' continuous assessment records on final Mock Examinations in the study schools: May 2012

4.2 The Causes of Students' low Performance in Geography

The causes of the weak performance of students were assessed under the following; content analysis of WAEC chief examination report on students weakness at the WASSCE; quantitative analysis of the strengths and weaknesses of students in the individual aspects of Geography, the level of fieldwork/practical exercises in geography lessons, and the availability of teaching-learning materials in the schools. Others include the quality and the availability of Geography teachers, teachers' methods and commitment level, as well as, other internal conditions of students.

4.2.1 Students' Strength in the Different Branches of Geography

The general weaknesses of candidates at WASSCE as highlighted in the annual Chief Examiner's reports of the West African Examinations Council (WAEC) seems to be recurring. Candidates' weaknesses in the Geography paper 1B (Physical and Practical geography) as captured by the 2006-2010 reports are summarised as follows;

1. Most candidates lacked knowledge in map reading, map interpretation and description.

2. The rubrics for most of the questions are not followed.
3. Wrong way of describing geographic features.
4. Wrong vocabulary, spellings and tenses construction.
5. Many candidates did not show any in-depth knowledge of the subject.

A content review of some of the specifics are highlighted as follows:

2006 WASSCE Geography, Paper 1B (Map work): Question 1

Study the map extract provided on a scale of 1:50,000 and answer Question 1.

- (a) *On the map, mark and name the following features using the letters in the brackets:*
 - i. watershed(W.S)
 - ii. trigonometrically station (TS)
 - iii. spur(S.P)
 - iv. valley(V)
- (b) *Shade completely any area below 2000ft in the northern part of the map.*
- (c) *In your answer booklet, calculate the gradient of River Mutumbiu in the northern-western quarter of the map.*
- (d) *Using evidence from the map, give two reasons why the region is sparsely populated.*

According to the Chief Examiners' Report (2006), for question (a): "only a few candidates were able to mark and name a watershed, a spur and a valley on the topographical map. Some of the students went on to reduce the map to their own chosen scale even though they were asked not. Most students marked and name the features on their reduce map instead of making them on the topographical map as demanded by the question." This is a clear case of lack of practical skills in map work and lack of understanding of the question.

With regard to Question (b), "this was not well answered by the candidate. Many candidates shaded areas which were not below 2000ft. This again is a case of lack of practical skill in map work.

As regards question (c) the report identifies that: "Ninety per cent (90%) of the candidates could not calculate the gradient of River Mutumbiu. Most candidates knew the formula for calculating the gradient of a river, that is:

Vertical Interval

Horizontal Equivalent

But could not work out the correct figures'. This is a further indication of students' scanty skills and knowledge in map work and mathematics. With Question (d) the report added that: "only a few candidates could give reasons why the region is sparsely populated". This is also a sign that students lack the skill of map reading and interpretation.

2006 WASSCE Geography, Paper 1B (Survey): Question 2

(a). *What is a traverse?*

(b). *Name four instruments used for the traverse survey.*

(c). *Describe the structure and the uses of a prismatic compass.* According to the Chief Examiner’s report (2006), this question was one of the unpopular questions. For question (a): “many students were not able to explain what a traverse is. Most of them missed the main point, especially the reference to ‘straight line ‘. With question (b), “items such as pencils, rulers, erasers, and notebooks which were mention by students are not accepted as instruments used in traverse surveying. The acceptable instruments are the chain or tape measure, ranging poles, prismatic compass, arrows or pegs, optical square or cross-staff”. The fact that students were not conversant with survey instruments indicates the paucity of resources for practical lessons of fieldwork. As regards question (c), the report states that: “it was fairly well answered by students. However, only few could tell the uses of prismatic compass”. This is a further clue that candidates were not exposed enough to fieldwork exercises. According to Dakpoe (2006), adequate skill in Practical geography cannot be obtained merely from a textbook teacher’s classroom illustrations. It is essential that students do a lot of fieldwork or practical activity. It is only through this that a fair knowledge of the subject can be acquired. These weakness bring into light a huge gap between the rational, the aims and the objectives and the outcomes of the geography curriculum in our SHSs.

The Chief Examiner's Report (2006), went on to suggest some general remedies to the above problems. They include the need for teachers to work hard to cover the syllabus on time; the need for candidates to read instructions carefully before answering the questions and; the need for teachers to teach students the skill of map reading, interpretation and how to identify features on the topographical map. Although the same suggestions keep on coming every year the trend in the weak performance seems to be perpetuated. This is an indication of lack of sufficient excursions to important geographical sites and exploration of local environment or may be attributed to the fact that some of these features are far removed from students’ immediate environment, meaning curriculum does not adequately address the issue of local context.

Students’ strengths or weaknesses in each of the three major aspects of Geography were assessed to understand how each impacts on the overall performance in Geography. The results as provided in Table 2 indicate that students' performance in Practical geography was very weak. Students scored an average mark of only 36% in Practical geography compared with Physical (56%) and Human &Regional Geography (65%). This learns credence to the observation by the Chief examination annual reports that students’ poor performance in Practical Geography account partly for the overall poor performance of students in Geography at the WASSCE.

Table 2 Students’ Performance in the different Branches of Geography in a teacher-made achievement test

Student	Physical Geography (40marks)	Human & Regional Geography (40marks)	Practical Geography (40marks)	Total Average %
Total	336	392	214	
Average	0.56	0.653	0.357	
Percentage	56.00%	65.33%	35.67%	52%

Author’s computation of teacher-made-achievements test in the study schools, May 2012

My observations during the marking of the researcher-made-achievement test were that the weak performance of students in practical Geography was demonstrated in students’ insufficient skills to undertake simple calculations, measurements, and interpretation of maps and charts, as well as, to represent simple information in a form of graph and chart. These weaknesses have links to the lack of well-stocked resources rooms, practical instruments, instructional materials and insufficient hands-on practice.

4.2.2 *The Level of Fieldwork /Practical Exercise*

Fieldwork or practical exercise is a very essential part of the teaching and learning of Geography. This activity-oriented method engages students to learn in groups or independently by exploring their environment thereby relating whatever they have learnt in the classroom to the reality in their environment (Alorvor and Sadat, 2010; Prosser, 2010). Through this, they learn the skill of gathering information through interviews, observations and to undertake simple calculations, measurements, and the interpretation of maps and charts. When teaching topics like land survey, research, map work, and landforms fieldwork or practical exercise are paramount. For this reason, the views of students were sought on how often they undertake fieldwork/ practical exercise. The results as depicted in Table 3 indicate a low level of fieldwork or practical exercise. This may explain the low performance of students in Practical geography.

Table 3 The Level of Practical Exercise

How often students undertake fieldwork/ practical exercise	Per cent
very often	0.0
often	22.7
once in a while	77.3
Total	100.0

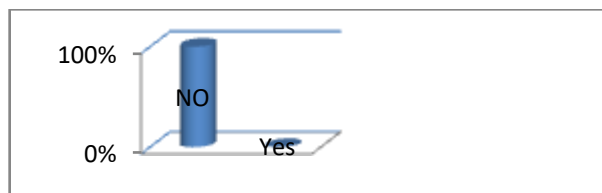
Author’s Field survey, May 2012

4.2.3. *Teaching and Learning Resources*

According to Dunbar (2001), availability of geography resource room and instructional materials are very crucial to the teaching and learning of geography. This is a place meant for designing and keeping teaching-learning materials. A well-stocked geography resources room should have assorted map extracts, audiovisuals, globes, digital camera, computer,

CDs of various geographical features. Others include survey instruments: prismatic compass, chain, tape measure, arrow, ranging poles, Global Position System (GPS) among others (Ministry of Education, Ghana SHS Geography Syllabus, 2010). The resource room ensures the ready availability of teaching/learning material, the long span of the materials and above all enable students to study and manipulate them at their leisure time for better appreciation and understanding. For this reason, the views of teachers were sought on the availability of geography resource room. Hundred per cent (100%) of respondent answered negatively meaning none of the school has a geography resources room. The result is shown in Fig .3.

Figure 3 The school has Geography Resource Room

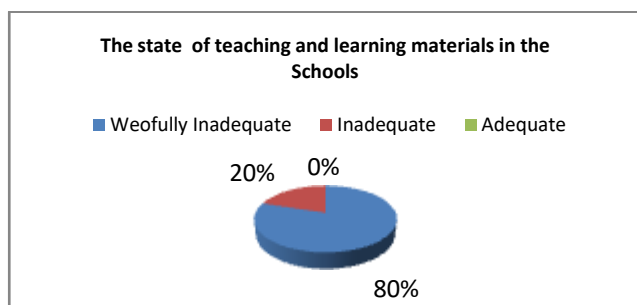


Author’s Field survey, May 2012

My observations from the field indicate that most of the teachers kept their teaching-learning materials either at the teachers' common room, library and a general storeroom for all the teachers. This leads to deterioration of the few teaching-learning materials available.

Furthermore, instructional materials were also assessed due to their indispensable nature to the teaching and learning of Geography. This is due to the fact that the discipline deals with concrete geographical features in our environment. Thus when students get the opportunity to manipulate teaching-learning materials during Geography lessons, it makes learning practical and permanent (Dakpoe, 2006). For this reason, the availability of teaching-learning materials for geography lessons was also assessed by sample teachers’ view. Eighty per cent (80%) of the teachers described it as woefully inadequate and the rest (20%) described it as inadequate. The results are shown in Figure 4.

Figure 4 Availability of Instructional Materials in the School



Author’s field survey, May 2012

An interview with teachers suggested that the support level offered by schools’ administration in this regard was very low. The administration also blamed the situation on the lack

of funds. The lack of Geography Resource room and teaching-learning materials do not facilitate teaching and learning hence the weak performance of students in Geography papers during examinations.

4.2.4 The Quality of Teachers

The greatest and the most indispensable resource in teaching-learning is the teacher(OECD, 2005). A good teacher requires strong preparation in the subject matter knowledge, the development of pedagogical skills, right disposition and the acquisition of the ability to make good judgments in practice (Alorvor & Sadat, 2010). The availability and the quality of teachers are very essential ingredients in the impartation of knowledge from teachers to students which also have a direct impact on the performance of students in examinations (OECD, 2005). For these reasons, the study sought to find out the availability of quality geography teachers in the schools in terms of qualifications, professionalism, and experience. The quantity of teachers is crucial in education as it has a direct bearing on the student-teacher ratio which also affects the quality of the teaching and learning(OECD, 2005). According to the MoE, Ghana (2010), each branch of Geography should ideally be taught by a different teacher and the three should be taught simultaneously throughout the duration of the course due to their interrelated nature. This facilitates a better comprehension of the other. For this reason, the number of geography teachers was assessed. The results as displayed in Fig 5 indicate that the study schools do not have the required number of geography teachers. There were two teachers in each of the schools and this fell short of the required number of three (3) teachers, one per a branch of Geography.

Teacher-student ratio is also a crucial pre-requisite for the quality of education. Hence this study sought to find out the teacher-student ratio in the schools. The realised that teacher-student ratio, especially in Geography classes was very high in the schools. For example, in the ASHS, there were two(2) teachers handling Geography 400 geography students giving a ratio of one(1) geography teacher to about two-hundred (200) students. This is far above the prescribed ratio of 1:25. This imbalance is the cause of the large class sizes of (over 60 students per class) in almost all the schools. This does not facilitate teaching-learning .especially, practical exercise and giving and marking of exercises. All these impact negatively on teaching- learning and output. With regard to the quality of teachers, it came to light that all the geography teachers in the schools were duly qualified academically as all of them were first degree holders (refer to Table 4).

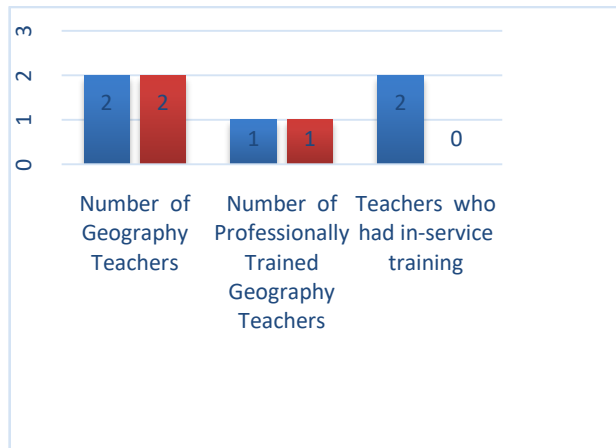
Table 4 Academic Qualifications of Geography Teachers in the Schools

Qualifications of Geography Teachers	Per cent
Certificate A, Post Sec	0.0
Higher National Diploma	0.0
Bachelor’s degree	100.0
Total	100.0

Author ‘field survey, May 2012

However, some of the teachers (two, representing 50%) as depicted in Fig 4.5 were not professionally trained teachers. This may have a bearing on their methods of instruction. It was further unveiled that, the quality of Geography teachers in the schools was not being enhanced through refresher courses for the teachers. When the views of the geography teachers were collated on the number of in-service training they had undergone for the past two years, the results as captured in Fig 5, shows that two (50%) of the teachers have not had in-service training for the past two years. The rest (50%) had had at least one in-service training during the period.

Figure 5 The Quantity and Quality of Geography Teachers



Author’s field survey, May 2012

"Experience, they say, is the best teacher", therefore, one would expect that with the necessary experience and exposure teachers would do better in teaching the discipline which will invaluablely impact positively on students' performance. For this reason, the experience level of teachers was assessed. The results as displayed in table 5 indicates that fifty per cent (50%) of the teachers handling Geography had taught for over seven (7) years. The other (50%) had less than five (5) years of teaching experience.

Table 5 Level of Experience of Geography Teachers

Number of Years in Teaching	Per cent
1-2years	25.0
3-4years	25.0
5-6years	0.0
Over 7years	50.0
Total	100.0

Author’s field Survey, May 2012

4.2.5. The Effective of Teachers’ Methods of Teaching Geography

The methodological approach to the teaching of geography is very crucial to the understanding of the subject by learners. Teaching geography requires the blending of different methods. Whilst lectures may be effective for learning

knowledge and facts, they may be inefficient for problem-solving and practical skills (Koomson, 2010).

Table 6 Methodology used by Teachers to teach Geography

Methodology	Tally	Frequency	Ranking
Discussions& Lecture method/exposition	##### #	6	1st
Activity Method	##### #	6	1st
The Project and problem-solving methods	#####	5	2nd
Discovery method	####	4	3rd
Audio-Visual approach	#	1	5th
Fieldwork methods	###	3	4th
Observation Method	###	3	4th

Author’s field survey, May 2012

In order to find out whether teachers are using the right methodology to teach, the views of Geography teachers in the study area were sought with regard to the type of methods they often used in teaching geography. As depicted in Table 6, it was found out that discussion and lecture; and activity methods ranked number one, followed by project and problem-solving method. The least applied methodology is the audio-visual approach (This approach is a video lesson which involves the use of the projector to display geographical landscape and phenomena such as volcanicity to facilitate understanding). The dominance of that discussion and lecture methods over the audio-visual and fieldwork approaches can be linked to the lack of teaching and learning materials in the school.

My observations from the field showed that teachers demonstrated a thorough knowledge with regard to the application of the right methodologies to the teaching of Geography. However, the appropriateness of the application of some of the methods to the delivery of certain topics was greatly hampered by the lack of teaching-learning materials.

According to Koomson (2010), selection and the use of methods ought to be tailored to the needs and the level of the learner. To hook the learner to the learning process and make learning permanent. In light of this, the views of students with respect to the relevance of teachers' methods to their needs were also sampled. The responses as captured on Table 7 indicate that the majority 66.0% were of the view that teachers’ methods aided their level of understanding in lessons. The rest (34.0%) held contrary views that teachers’ methods do not meet their needs.

Table 7 Students’ views on the Relevance of teacher’s methods

Teacher's methods facilitate understanding of students	Per cent
Yes	34.0
No	66.0
Total	100.0

Author’s field survey, May 2012

The appropriateness of teacher’s methods to the needs and interest of students and its impact on performance was further assessed by analyzing students’ achievement (scores) in class assignment/exercise. This was done to monitor the learning progress of students during instructions so as to see how well teachers’ methods were impacting on understanding which should invariably impact on their performance. For this purpose six (6) class assignments/exercises of students from ASHS over a period of three (3) years were collated and analyzed. The results of this formative evaluation as depicted in Table 4.8 show that teachers' methods were impacting positively on students achievements at least in the short term. As the general performance of students in class assignments/exercises can be described as very good (71% average score). Similar results were replicated at MSHS where the average performance was 72%.

However, when the above results are juxtaposed on students achievements in summative evaluations as captured in (Fig1, Fig 2 and Table 1), there seem to be a huge gap between the impact of teachers’ methods on students’ performance in formative evaluation (class assignment and exercises) and students’ performance in summative evaluations (WASSCE and mock examinations). This missing link can also be traced to other factors external to the teacher, but internal to the learner. These factors include students’ level of interest in Geography, and motivation to learn the discipline compared with other competing subjects. As well as, how students used their leisure/personal time. These have a direct impact of the extent to which students revise and practice what is taught in class.

Table 8 Impact of teacher's method on students Achievements informative tests

Exercises	Exercise 1	Exercise 2	Exercise 3	Exercise 4	Exercise 5	Exercise 6	Total
Student	20marks	20marks	10marks	30marks	10marks	10marks	100marks
1	14	17	8	20	8	10	77
2	16	13	10	15	8	8	70
3	12	10	8	14	6	7	57
4	14	13	9	12	5	8	61
5	16	18	10	25	10	10	89
6	18	20	10	24	10	10	92
7	12	10	6	24	8	8	68
8	14	18	8	20	6	6	72
9	10	12	8	20	5	6	61
10	16	18	9	26	8	10	87
11	18	18	9	25	10	10	90
12	10	12	9	15	10	8	64
13	20	16	8	23	7	10	84
14	12	10	8	16	8	6	60
15	18	20	10	28	8	10	94

16	14	18	8	20	6	6	72
17	10	12	8	20	5	6	61
18	12	10	8	14	6	7	57
19	14	13	9	12	5	8	61
20	12	10	8	14	6	7	57
Total	282	288	171	387	145	161	1434
Average: Performance: 1434/2000 = 0.71							
Overall Performance 71%(B2):							

Author’s construction base on the analysis of class assignments scores of 20 students

4.2.6 Teachers’ Commitment to the Teaching of Geography

Giving assignments/exercise to students provide instant feedback about the extent to which students have mastered the content taught and to what extent the learning objectives have been achieved. Take home assignments also engage students to learn on their own and make use of their leisure time. Also, marking and grading students' achievements also serve as motivation for students to learn. All of these impact positively on the performance of students in examinations (Koomson, 2010). There is a generally held view that teachers do not give enough exercises in class let alone marking them and seeing to it that students do the necessary corrections, hence the need for this study to assess the role of teachers in this regard. It is against this backdrop that Table 9 sought to illustrate these findings from the perspective of the students.

Table 9 Students’ View on the Number of taking Home- Assignment per Term

Numbers of Class Exercises per term	Per cent
0-3 Exercises	54.6
4-6 Exercises	45.4
6 + Exercises	0.0
Total	100.0

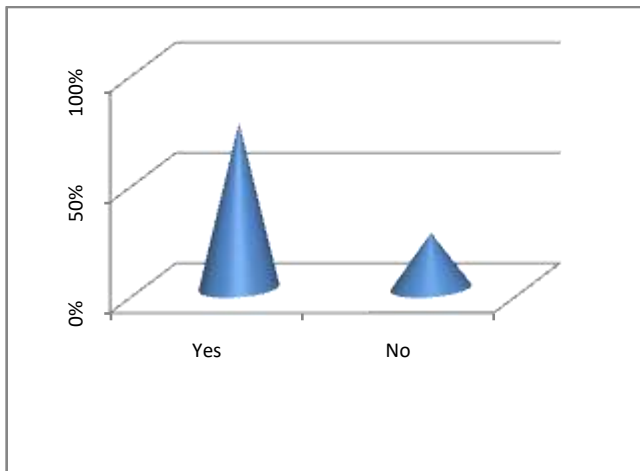
Author’s field survey, May 2012

It was deduced that the majority, of students (54.6%) were of the view that teachers were giving between 0-3 exercises per term. The rest (45.4 %) said that teachers were giving between 4-6 exercises per term. These numbers may be described as relatively sufficient. However, when students were interviewed on the extent to which teacher promptly marked these exercises and guide them to do the necessary corrections, it came to light that teachers were not doing well in this regard. When teachers were interviewed on this, they were honest on this fact but attributed it to the large class sizes. This may explain students' apathy towards learning of Geography. This is clearly not a good practice for students to pass their examinations.

There is a school of thought that teachers' burden in the classroom is becoming increasingly greater thereby making them virtually ineffective. This problem of overburdened

teachers, apart from the additional responsibilities is the schools, is being aggravated by the increasing commitments of teachers to private or extra classes. It is against this background that the study sought to find out teachers' additional commitments in private/extra classes. The views of teachers as displayed in Fig. 6 show that the majority (75%) have commitments to private extra classes. This incidence might have a link to the conditions of service, incentives and motivation of teacher. The effect of this too many extra classes is that teachers may not get sufficient time to prepare before lessons, mark students assignment among others.

Figure 6 Teachers Views on their commitment to private extra classes



Author's field survey: May 2012

4.2.7 Internal Conditions of Students and learning outcomes

The success of candidates in passing examinations does not lie solely on the quality of the teachers and availability of resources and facilities, but also partly on students' interests, attention, attitudes and approach to learning (Bunce, Flens, & Neiles 2010). All of these have a bearing on the level of commitment and performance of students to the learning process. Interest is the motivating force that compels a learner to attend to a particular activity. Attention, on the other hand, has to do with the emotional state of the mind of the learner and this affect attitude. Positive attitudes such as the curiosity to learn, positive predisposition towards a particular discipline affect interest and attention (Aggarwal, 2005; Bunce, Flens, & Neiles 2010). All these have implications on approach, the frequency of practice, understanding and achievement. For these reasons, the internal conditions of the student were investigated in this study.

Firstly, students' interests in Geography as compared with other elective subjects that are common to all the students were evaluated. In connection with this, respondents (students) were asked to rank their electives subjects in order of preference (interest and achievement). The results as displayed in table 10 indicates that Geography was the least ranked favourite discipline among students.

Table 10 Rankings of students interests in Elective Arts Subjects

Subjects	Preference 1 Frequency	Preference 2 Frequency	Preference 3 Frequency	Rank
Geography	10	16	20	3 rd
Economics	19	21	10	1 st
Government	15	7	14	2 nd
Total	44	44	44	

Author' field survey: May. 2012

Interest can be the cause of an activity (Bunce, Flens, & Neiles 2010) for this reason students' interest in the discipline was further examined from the perspectives of teachers on the extent to which students use their leisure time to learn Geography.

Table 11 Teachers' responses on how students use their leisure time

Students use their Leisure time to practice Geography	Frequency	Percentage
Yes	0	0.0
No	4	100.0
Total	4	100.0

Author's Field Survey: May 2012

The results as depicted in Table 11 show that all of them (100%) were of the view that students do not use their leisure time to practice their geography lessons. This is a further indication of low interest of students in Geography. This low level of practice does not help to achieve consolidation and retention. Hence, this may explain the missing link between students' good performance in formative evaluation (class assignment and exercises) and the rather weak performance in summative evaluation (WASSCE and mock).

The commitment level of students to the learning process relates to the level of interest. This, in turn, affects performance. Hence students view's respondents' views on this matter. When teachers were asked to rate the general approach and commitment of students to the teaching and learning of Geography during classes, fifty per cent (50%) described it as poor, and another 50% said the students' approach was positive. This intermittent approach or commitment level of students also explains the gap in students' achievement in evaluative and summative assessments.

When respondents (teachers and the students) views on what can be done to improve the interest and performance of students in Geography, some of their responses include; the need to provide more teaching and learning materials for practical or fieldwork, more field trips/excursions to important geographical sites should be organized, students must be familiar with teaching-learning materials (like the globe, maps and survey instruments), the need for teachers to teach to the understanding level of students, and the need to use audio-visual method to teach topics on landforms, and that the content of the Geography Syllabus should be reduced.

Furthermore, students' previously learnt capabilities is another important internal condition of learning (Aggarwal, 2005). Hence, students prior learning in terms of the BECE results upon which they were admitted into the schools were collated and analyses. For the purpose of the analysis the aggregate score of six best subjects [including Mathematics, English, Science and Social studies, and two other subjects] were taken and grouped into the following performance cohort Aggregate 6-12 (Distinction), 13-12 (High), 20-26 (Average), 27-30 (Below Average) and 31-36 (Weak). The results as depicted in Table 12 show that Forty-five per cent (45%) achieved a score between aggregate 20-26 (average), and another 28% scored between aggregate 27-30 (below average). Only 2% of the students had an aggregate 6-12 (Distinction). The students admitted into the study schools can, therefore, be described as average students. All other things being equal average students will churn out average performance unless there are intensive remedial and mentoring programmes.

Table 12 Student's previously learnt capability

The aggregate of six best subjects (including Mathematics, English, Science, Social studies)	Per cent
6-12 (Distinction)	2.0
13-19 (High)	19.0
20-26 (Average)	45.0
27-30 (Below Average)	28.0
31-36 (Weak)	6.0
Total	100.0

Author's analysis of geography students' Basic Education Certificate Examinations results used to gain admission into the two study SHSs

When the assistant headmasters were interviewed on the calibre of students admitted into the schools. They observed that schools get the majority of their students from Basic Schools in the surrounding rural and remote villages. And most of these schools lack the necessary infrastructure, teaching-learning resources and trained teachers. Hence, they turned out average to weak students to feed the two SHSs in the district. The headmasters further observed that few high achieving students from the surrounding Basic Schools prefer metropolitan SHSs to theirs and the schools are also not able to attract high-quality students from other districts of Ghana.

4.2.8 Effective Use of Contact Hours in School

It has been identified that loss of contact hours can also have an effect on the completion of the syllabus in time. For this reason, the effective use of contact hours in the schools was also assessed by this study. Interview with assistant headmasters in the schools revealed that contact hours on the part of teachers are effectively utilised, however, it came to light that the problems associated with the payment and collection of school fees lead to huge loss of contact hours. According to the teachers, about 70% of students in the school lose about 2-3 weeks of contact hours per term due to late

payment of school fees. This problem is recurring during the first 2 weeks of re-opening and a week after the mid-terms break as most of the students fail to report to school because they do not get their fees in time, even some of those who report may come without their fees and are therefore sent back home for non-payment of fees. The assistant headmasters admitted the issue of payment of fees was a big problem in the study area and this is impacting negatively on teaching-learning and output.

4.2.9 The effectiveness of the School Time Table

The school's time table is very crucial to teaching and learning. If the arrangements of the various components are not properly done, it will impact negatively on teaching and learning (Alorvor, & Sadat, 2010). Table 13 summaries the views of the geography teachers on whether the allocations of time (periods) on the school's time table facilitate the efficient teaching-learning of Geography and the completion of the syllabus on time. All the teachers answered the negative. This means that allocation of (periods) for geography lessons on the school time table is not sufficient or effective enough to ensure successful completion of the geography syllabus before the WASSCE.

Table 13: Teachers' Perception of the effectiveness of the School Time Table to the Teaching of Geography

Time allocation for Geography on the school's time table facilitate the efficient completion of the syllabus on time	Per cent
Yes	0.0
No	100.0
Total	100.0

Author's field survey, May 2012

When teachers were asked about the strategies that can be adopted to ensure that they cover, if not all, much of the syllabus on time, they suggested that they should be assisted to give out prepared hand-outs or get the students some good pamphlets on the subject. This, they were of the view, will reduce much of the time wastage associated with the writing off too many notes in class. They further suggested extra classes as another important panacea to this problem.

Also, teachers and assistant headmasters were interviewed with parents and community participation in school. The significant role that the Parents Teachers Associations (PTAs) are playing in the schools in the area of voluntary levies for infrastructure improvement was acknowledged and praised. However, this is limited to the committed few as the majority of parents are not active in PTA activity. Also, they observed that parents and community role of taking an active interest in school teaching and learning including more responsibility in their children learning is somehow lacking. This is also a link to the low socio-economic status, especially the education of the homes and communities in the catchment areas of the study schools.

Generally, the results indicate four major sources of challenges. The first source is teacher-related factors including

the availability and quality of teachers, teacher's commitment to teaching, and teachers' methods. The students' related factors include learners' interests or motivation, previously learnt capabilities, opportunities to manipulate instructional materials and practice what is learnt in class and work rates. The third sources are school-related factors. They include the availability of instructional materials and resources rooms, effective school timetabling systems, and quality supervision and support to teaching and learning. The last is made up of parents/ community involvement in school and students learning. The government's role, policy and investment play a key role in shaping the nature and the quality effects of these factors to enhance students' learning, and learning outcomes. And by extension the quality performance of students at the WASSCE. The findings thus suggest the need for deliberate and effective collaboration among educational stakeholders in enacting relevant pedagogy and practices to maximise efficient effective, fair and relevant learning experiences and better learning outcomes for all students.

V. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The crust of this investigation was to find out the causes for the students' poor performance in Geography at the WASSCE with the aim to inform relevant interventions and practices for better learning outcomes. From the investigations came the following findings:

5.1 Findings

The study revealed that the generally poor performance of students in the Practical geography aspect contributes to the overall weak performance in the Geography paper as a whole at the WASSCE. This is attributed to the low level of practical or fieldwork, field trip activity in Geography lessons. This is also linked to the problems of lack of well-stocked geography resources rooms, instructional materials, and other resources in the schools. These hampered the opportunity for students to manipulate instructional materials and also link the classroom to students' life worlds for better appreciation and understanding for learning to become permanent.

The findings on the causes of students' weak performance further revealed that the quality and the quantity of Geography teachers in the study schools fall short of the ideal requirements expected for the teaching of the discipline. Both schools still needed extra teachers to meet the requirement of a teacher per branch of Geography to teach the three aspects simultaneously throughout the duration of the course. With regard to the quality some of the teachers, though academically qualified, were not professionally trained to teach the discipline. Also, some of the teachers were not experienced enough due to high teachers' turnover in rural schools In Ghana as teachers prefer well-resourced schools in metropolitan areas. It was further unveiled that, the quality of geography teachers in the schools was not being enhanced

through refresher courses to facilitates continuous sharpening of teachers' methods.

The finding of the study further revealed that the appropriateness and the efficacy of teachers' methods to the delivery of certain topics were greatly hampered by the lack of instructional materials and resources rooms. It came into light that fieldwork and audio-visual methods that are very crucial to the teaching and learning of geography lagged behind other methods like discussion and lecture methods. The domination of that discussion and lecture methods were found to have a link to the problem of lack of resources rooms and instructional materials.

The study revealed a missing link between the impact of teachers' methods on students' performance in formative evaluation (class assignment and exercises) which was found to be very good as against that of summative evaluations (WASSCE and mock examinations) which were found to be poor. This missing link was traced to the low level of students' interest and motivation to the learning of Geography as compared with other electives subjects like Economic and Government. This can further be traced to the low level of practical activity in geography lesson due to the paucity of resources.

The study also found that the level of students' previously learnt capabilities that they bring on board the teaching and learning process in SHS was very low. This is attributable to the general poor learning outcomes and achievement of that various Basic schools in the catchment area the feed the study schools. The poor outcomes in Basic Education are thus carried over to SHS education.

The finding further revealed that teachers' commitments to teaching-learning was divided due to teachers' commitments to other income generated activities such as the increasing spate of private or part time classes outside the schools' time table. Other factors (external to both the teacher and the learner) which also contributed to the poor performance of students in Geography include insufficient allocation of time (periods) for fieldwork activity. Also, the insufficient allocation of periods for geography lessons, especially, Practical geography on the schools' time table does not facilitate the completion of teachers' scheme of work and the syllabus on time. Hence students are not prepared adequately for the WASSCE.

The finding also revealed a low level of parents and community participation in school. Generally, the study found the general role of government in policy direction or investment into schools was not being sufficiently translated into practicable and localised interventions at the school level. To shape the nature and the quality of home/community and school collaboration to enhance teaching and learning, and learning outcomes. The findings thus revealed a gap in collaboration among educational stakeholders at the local level to pursuing relevant pedagogy and practices to maximise better learning outcomes for all students.

5.2 Conclusions

The conclusion drawn from this study is that given a strong commitment level of teachers and students to the teaching and learning process, and coupled with the use of right methodologies and resources; and sufficient time allocation to fieldwork or practical activity, the performance of students in Geography will be enhanced. The study argues for effective collaboration among the school, the communities and to seek for relevant interventions and practices to maximise better and fair learning experiences and excellent learning outcomes for all students. The government role in giving adequate and clear cut power to the grassroots communities and their school through an effective decentralization policy on teachers recruitment and promotion, budgeting and the continuous building of local capacity can facilitate the translation of nationalised educational policy goal into practicable localized practices and interventions to improve relevant learning and students learning outcomes in SHSs in Ghana.

5.3 Recommendations

The study therefore recommends that to improve students' performance in Practical aspect of Geography there is the need to revamp practical activity. Land survey, map work and research must be emphasised for a student to develop the necessary skills and interest. Also, field trips to important geographical sites will also help to arouse students' interest in Practical Geography to be specific and Geography in general. Also, to enhance the teaching of Practical geography there is the need for the schools to be provided with geography resources rooms. This room should be well stocked with teaching-learning materials such as assorted map extracts, audio-visuals, globes, digital camera, computer CDs of various geographical features, and survey instruments (prismatic compass, chain, tape measure, arrow, ranging poles, and global position system) among others. This will make teaching and learning more practical and offer the opportunity for students to study and manipulate teaching-learning materials at their leisure time for better appreciation and understanding. This will further enhance student interest in geography and make learning permanent. This will reduce the gap between students achievement in formative and summative evaluation. The roles of stakeholders including the PTA, old student associations, School Management Committees and boards, the local government unit, and the Ministry of Education as well as NGOs are crucial in this regards. Furthermore, Quantity and the quality of geography teachers should be enhanced by encouraging the non-professional teachers to upgrade themselves. In-service training for teachers should be organised regularly to refresh teachers' knowledge of modern teaching methods. The Ministry of Education and the government should retain teachers in the service by providing them with appreciable retention premium. This will help to retain more experienced teachers in our schools to enhance the quality of teaching and learning. More significantly, to reverse the increasing

incidence of teachers' commitments to part-time classes outside the regular school for additional income that tends to disrupt their commitment and output, teachers should be well-motivated so as to fully dedicate their time to regular classroom teaching in school. The heads of schools should also regulate the incidence of extra classes that go on in the school premises. Generally, an effective school-community collaboration should be promoted to enhance culturally responsive school practices and relevant learning outcomes. To ensure that schooling is linked to students' lifeworlds and the local community's fund of knowledge. The government should devolve adequate power to the grassroots to enable local community and their schools enact relevant and contextual intervention and practices that are in tuned with localised systems. This can reduce cost, facilitate efficiency, encourages critical pedagogy and relevant learning outcomes.

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