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Raising educational standards by means of school effectiveness:

A quantitative study of ten senior high schools in the Ashanti region of Ghana.

JYVÄSKYLÄN YLIOPISTO

Tiivistelmä – Abstract

School effectiveness comprises all efforts to produce the best in order to enhance students' learning outcomes. Yet, schools are assessed mostly by means of students' average scores in achievement tests. Consequently, pundits in the field of education in Ghana have expressed worries about the alarming nature of falling academic standards following the release of the recent Basic Education Certificate Examination and the West African Senior School Examination. Yet they fail to highlight the fact that school achievement goes beyond the students' test scores and that school achievement extends to the socioeconomic factors of students. This study aimed at finding appropriate means of raising education standards in Ghana by involving all and sundry, including students, teachers, headmasters, parents and the community at large.

A quantitative study was carried out on ten senior high schools in Ghana. Three sets of questionnaires, which were based on the research questions, were administered to three groups of respondents (headmasters and teachers, students, and parents) to collect the data for the research. More so, the SPSS software was used to analyse the data. Particularly, descriptive, independent sample T-test, and Analysis of variance were used to measure items in the data.

Finally, the study revealed that schools that perform better consider effectiveness enhancing factors, such as fair distribution and availability of teaching and learning materials, equal opportunity to learn, quality teacher development, effective leadership, and effective school-community partnership, as key to raising academic standards. It was also found that, mainly, there are really no differences between headmasters, teachers, students, and parents in terms of their perceptions on school effectiveness.

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Tiivistelmä – Abstract

Koulun vaikuttavuus sisältää kaikki ne pyrkimykset, joiden pyritään kehittämään koulun toimintaa niin että oppilaiden oppimistulokset ovat mahdollisemman hyvät. Kuitenkin kouluja arvioidaan enimmäkseen oppilaiden valtakunnallisten kokeiden keskiarvojen perusteella. Kasvatusalan asiantuntijat Ghanassa ovatkin huolissaan hälyttävästä oppimistulosten laskusta niin perusopetuksen kuin lukiokoulutuksenkin viimeaikaisissa valtakunnallisissa kokeissa. Silti unohtuu korostamatta se tosiasia, että koulun menestyminen on paljon muutakin kuin oppilaiden testitulokset ja että koulun menestyminen ulottuu oppilaiden sosioekonomisiin tekijöihin. Tämän tutkimuksen tavoitteena oli löytää sopivia menetelmiä oppimistulosten parantamiseksi Ghanassa huomioimalla monipuolisesti oppilaat, opettajat, rehtorit, vanhemmat ja muu yhteisö.

Määrällinen tutkimus toteutettiin kymmenessä lukiossa Ghanassa. Aineistonkeruuta varten kolme keskenään erilaista tutkimuskysymyksiin perustuvaa kyselylomaketta jaettiin kolmelle vastaajaryhmälle (rehtorit ja opettajat, oppilaat ja vanhemmat). Aineiston analysointiin käytettiin SPSS -ohjelmaa. Erityisesti aineiston mittaamisessa käytettiin kuvailua, t-testiä ja varianssianalyysiä.

Tutkimuksen perusteella ne koulut, jotka menestyvät paremmin, pitivät vaikuttavuuden saavuttamisen tekijöinä sellaisia seikkoja kuten oppimismateriaalien oikeudenmukainen jakaantuminen ja saatavuus, tasavertainen mahdollisuus oppia, laadukas opettajien kehittäminen, tehokas johtajuus ja vaikuttava kouluyhteisö - kumppanuus. Nämä ovat avaintekijöitä oppimistulosten parantamiseksi. Tämän tuloksen lisäksi pääsääntöisesti rehtoreiden, opettajien, oppilaiden ja vanhempien näkemyksissä koulun vaikuttavuudesta ei ollut eroja.

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1 INTRODUCTION

School effectiveness is greatly considered as the pivot in ensuring quality in schools. It includes efficiency, productivity, accountability and the survival power within the school (Scheerens & Bosker, 1997, p. 3). In other words, school effectiveness comprises of all efforts to produce the best in order to enhance students' learning outcomes. In view of this, schools are assessed mostly by students' average score in an achievement test (Hippel, 2009, p. 187). Consequently, educational experts in Ghana have expressed worries about the alarming nature of falling educational standards following the release of the recent Basic Education Certificate Examination (BECE) and the West African Senior School Examination (WASSE). Particularly, at the Senior High School level, there has been a significant decrease in the performance of students since 2004, and this has created a greater concern for all (Ministries of Education, Science and Sports [MoESS], 2008, p. 80). Even so, educators in Ghana have failed to highlight the fact that school achievement goes beyond the students' achievement test scores. American Educational Research Association [AERA] in conjunction with the American Psychological Association [APA] and the National Council on Measurement in Education [NCME] (1999, p. 76) admit that students tend to score low when they have not had the opportunity to learn the subject matter and that the policy of using test scores to withhold a high school diploma is unfair. Besides, Hippel (2009, p. 187) concurs that school achievement extends to the socioeconomic factors of students. Therefore, the use of student outcome to indicate school effectiveness is deemed as "premature and inappropriate" (Berman & Mclaughlin, 1975, p. 7).

Moreover, educational pundits talk of fallen standards in education in Ghana by asserting principally on poor examination result (Ankomah, Koomson, Bonsu, &

Oduro, 2005, p. 6). In other words, efforts to raise educational standards in Ghana have been mostly centered on students and teachers, leaving administrators, parents and the community off the hook. Nonetheless, school effectiveness must involve all and sundry such as students, teachers, administrators, parents and the community at large in order to raise the academic standards of students; as Donkor (2010, p. 27) believes, collaboration among schools and communities at large produces positive outcomes. This study thus seeks to find appropriate means of raising educational standards in Ghana.

With respect to problems that necessitated prior to conducting this research, Ghana's aim of achieving the goal of a middle income country and providing equal access to education by 2015 prominently depends on the quality of education available (Ministry of Education, Science and Sports [MoESS], 2008, p. 72). For this reason, educational standards have clasped the concern of every Ghanaian. Another research problem is the fact that schools are situated within communities but there is a huge gap between these two entities in terms of their operations and activities in Ghana. Center for Mental Health in Schools (1999, p. 6) asserts that schools are located in communities, yet they are often seen as islands with no bridges to the mainland. Indeed, Ghanaian teachers usually expressed concern about a wide breach between what parents say about the importance of education and what they do to support their children in school (Donkor, 2010, p. 31). Besides, the phenomenon of school effectiveness has been widely studied worldwide. However, few studies have been conducted on school effectiveness in developing countries such as Ghana concerning instructional processes at the classroom level (Scheerens, 2001, p. 380). Particularly in Ghana, Ankomah et al. (2005, p. 1) acknowledge that quality in education is the gateway for Africa to catch up with rest of the world, yet, Ghana has little to say about it in terms of research based literature relating to quality of education.

Finally, it is worth noting that the establishments of good and effective schools remain vital to achieving the millennium goal. Thus, the essence of effectiveness in school is unavoidable, school matters in the children's development, and it does really make a difference (Reynolds & Creemers, 1990, p. 1). Hence, raising educational standards in schools is an important issue, which requires efforts of all educational stakeholders.

Overall, in this research, a literature review on educational standards and school effectiveness was conducted. A quantitative study was then carried out in ten senior high schools in Ghana through which a questionnaire based on the research questions and the reviewed literature was administered to collect the data for the research. The SPSS software was used in analyzing the data collected. Ultimately, this study seeks to bring on board some contributions that will lead to high educational standards in Ghana and proposes some recommendations about educational standards and school effectiveness, as well as makes suggestions for further studies.

2 THEORETICAL BACKGROUND OF THE STUDY

Generally, theories explain an observed relationship between phenomena (Odi, 1982, p. 55). The phenomenon of this study is primarily to determine appropriate means of raising educational standards in Ghana. The focus of this theoretical background is, therefore, on school effectiveness processes, which will produce high educational standards in Ghana. In brief, this chapter will review literatures made by earlier researchers on educational standards and school effectiveness process leading to quality education and high performance.

2.1 Educational standards

The word 'standard' is both a goal, which deals with what should be done, and a measure of development towards that goal, which explains how well it was done. Every real standard is subject to observation, evaluation, and measurement, otherwise there will be no value or meaning to it. Standards may be mandatory, voluntary and are accepted by custom. They are basically made to improve quality of life and serve as a preventive guide from chaotic, unpredictable dangerous life (Morrison, 1997, p. 3.). Educational standards for all students are, without doubt, the benchmark for academic success (Hughes, 2010, p. 86). There are a variety of meanings to educational standards and they can be defined in the context of a particular nation (European Network for Quality Assurance [ENQA], 2009 p. 12). Lachat (1999, p. 3) defines it as what students should know and be able to perform to live and work successfully in a global, technology-driven economy. In simple terms, the U.S. Department of Education (2010,

p. 2) considers educational standards as what students must know and be able to perform at each level of their studies. Thus, educational standards describe what students are expected to know and be capable to do. Moreover, educational standards are both goals that deal with what should be done and measures of development towards those goals, which explain how well they were done. Real standards are subject to observation, evaluation, and measurement, otherwise there will be no value or meaning to them (Morrison, 1997, p. 3.).

Standards in education have three distinct meanings and purposes, including content, performance, and opportunity-to-learn (Morrison, p. 4). Lachat (1999, p. 5) perceives content standards as the starting point for curriculum improvement since they describe what teachers must teach and what students should learn in all subject areas. They clearly specify what teachers are supposed to teach and what students are expected to learn (Morrison, 1997, p. 4). Likewise, content standards refer to the acquisition of knowledge, skills, and understandings by students in order to attain proficiency in a subject area (Lachat, 1999, p. 5). Content standards are to be made available to both students and parents, in order for them to understand the expectations of the school, and are measured to find out student's mastery of skills and knowledge (Morrison, 1997, p. 4).

On the other hand, performance standards determine what students must demonstrate appropriately to be considered proficient in the subject matter defined in the content standards (Lachat, 1999, p. 5). In other words, they provide the answer to the question: "how good is good enough?" and describe the accomplishment of students and demonstrate how students have mastered the materials as stipulated in the content standards as well as the quality of student's performance (Morrison, 1997, p. 40). Correspondingly, performance standards stipulate how well students must perform, whereas content standards stipulate what students will be taught (Kohn, 2001, p. 1). In that situation, the teacher's expectations and the student's achievement have a huge influence in the raising of educational standards (Hughes, 2010, p. 86). Hence educational standard is assessed on the performance of both the student and the teacher.

Furthermore, opportunity-to-learn standards also define the availability of programmes, staff, and the provision of resources by the school, district and the state to students to challenge them in fulfilling the content and performance standards. Experts

concur that students cannot meet high standards, unless they are provided with up-to-date and adequate resources (Morrison, 1997, p. 4.) Lachat (1999, p. 8) concedes that educational standards cannot improve students' performance, unless the issues of inequalities of resources available to schools are well addressed.

Rationale for establishing educational standards is first to ensure children have equal access to school and education, as well as to ensure high quality of education (Morrison, 1997, pp. 4–7). Educational standards also provide families and communities the chance to assess and evaluate the performance of their kids and their schools (ENQA, 2009, p. 2). However, a reasonable number of people in the field of education disagree about the usefulness of standards as a strategy for educational reform, though they would never argue in favour of low standards. Again, experts admit that there is a mix-up about standards. Some say standards are flags of sorts, others say they are goals' attainment, whereas others think of standards as descriptions of various proficiency levels (Noddings, 1997, p. 184.).

More so, educational standard is currently shifting from access for all to high quality for all, by giving prominent preference to better results for all students. This is because policymakers believe that expectations of students have been fallen (Lachat, 1999, p. 7). As Noddings (1997, p. 3) correctly points, standards in education are sometimes referred to without any concrete meaning, for example "we should improve our standards." This is a typical statement often heard from the media in Ghana, since educational advocates talk of fallen standards in education in Ghana by asserting, principally on poor examination results. (Ankomah et al., 2005, p. 6). Rather, tests should be used to improve instruction. That is to say, tests must be used to find out not only what students have learned but also why they had not learned what was taught.

Furthermore, teachers could improve instruction and reduce low performance of students through assessing students' errors and misconceptions (Morrison, 1997, p. 24.). It is very disheartening that everybody is particular about the student meeting the standards, nonetheless, no one is willing to dedicate and channel his or her time to meet the standards that schools are supposed to deliver (Noddings, 1997, pp. 185–186). It is evident that quality of education also includes some non-measurable outcomes, which need to be urgently tackled (Ankomah et al., 2005, p. 6). In sum, Noddings (1997, p.

186) argues that students provided with good learning resources both inside and outside schools are more likely to achieve learning success.

2.2 School effectiveness

School effectiveness remains one of the prominent issues to be considered in order to achieve quality in schools. Literatures into school effectiveness are very enormous and have gained more international recognition based on the recent increase of written journals and articles (Davies & Harber, 2005, p. 26; Sammons, Thomas, & Mortimore, 1996, p. 1; Gray, Jesson, & Sime, 1990, p. 137). In general terms, effectiveness refers to the ability to realize stated educational goals. (Seiler, Ewalt, Jones, Landy, Olds & Young, 2006, p. 5). Scheerens, Glas, and Thomas (2003, p. 223) share a similar view and describe effectiveness as the desired level of output to be achieved.

Scheerens (2000, p. 20) refers to school effectiveness as "the degree to which schools achieve their goals, in comparison with other schools that are 'equalized', in terms of student-intake, through manipulation of certain conditions by the school itself or the immediate school context". Another school of thought defines school effectiveness as "all theories and research studies concerning the means-ends relationships between educational processes and outcomes, in particular student knowledge and skills in several domains aiming at explanations for differences in student achievement between schools and classrooms" (Creemers & Reezigt, 1997, p. 401). School effectiveness, basically, measures what happens to students after school, including the future career competence of students. Scheerens (2000, p. 18) describes school effectiveness as "the performance of the organizational unit called school", where performance, in this context, refers to the output of the school, which tends to measure the average achievement of students at the end of formal schooling.

An effective school is defined as one in which the student's progress extends further than might be expected concerning its intake (Mortimore, 1991, p. 9). Admittedly, the functions and structures of schools have undergone some immense transformation globally (Aggarwal-Gupta & Vohra, 2010, p. 1). An effective school, therefore, adds value to its students' outcomes by considering factors such as students' socio-economic status, and most of all measuring their prior attainment as a baseline

against which subsequent progress can be assessed (Sammons, 2007, p. 13). Besides, students' performances are not the only yardstick to effectiveness. School effectiveness does not seek to measure merely the cognitive domain but also the psychosocial domains of students, as well as socioeconomic factors surrounding students' performances (Creemers et al., 1998, p. 127). Furthermore, measuring school effectiveness does not only rummage around for the educational effectiveness but also considers some external changes in students (Aggarwal-Gupta & Vohra, 2010, p. 2).

School effectiveness is measured by comparing schools, districts, nations and sometimes continents to determine, which is more effective in terms of standards (Fertig, 2000, pp. 388–396). Certainly, school effectiveness cannot be measured reflexively without considering the context of the school or country. Furthermore, for a school to be effective, the national educational policies, goals, needs and aspirations and so on must be taken into consideration (Fertig, 2000, p. 389.). Besides, what is perceived as efficient at a particular place may not be so in another. Sammons (2007, p. 23) concedes "the study of the extent of variation in and relationships between specific features of school and classroom organization, practices and climate and value added measures of effectiveness in promoting specific educational outcomes for students". One of the main conclusions of Scheerens (2001, p. 356) advocates that when studying school effectiveness in developing countries, both in the sense of structural and cultural conditions, it is importance to look from the perspective of the macro level context.

More so, educational effectiveness defines the level factors in a school that are associated with student outcomes (Creemers & Kyriakides, 2010, p. 263). Actually, School Effectiveness Researchers [SERs] do not only want to ascertain what works in education but also why certain things work. For instance, SER wishes to find out how leadership influences organizational learning, teaching and learning and student outcomes. It is worth noting that leadership should not merely focus on the headmaster but should be fairly distributed among a range of school personnel. Most importantly, quality teaching and expectations have a significant role to play in enhancing students' learning, progress and achievement (Sammon, 2007, pp. 20–29.) Not only that, Fertig (2000, p. 395) also asserts that activities of the school extremely depend on what educational stakeholders bring to bear.

Finally, Seiler et al. (2006, p. 5) contend that school effectiveness is a multifaceted concept and this makes its definition and analysis more difficult, yet once defined, Scheerens (2000, p. 7) admits, it is difficult to measure. For instance, a school may achieve a high test score and be regarded as being effective but may fail other indicators such as student retention (Seiler et al., 2006, p. 5). Given the complex nature of defining and measuring school effectiveness, one cannot judge the effectiveness of a school based only on students' test scores, while neglecting other factors surrounding it. Educational panaceas have emphasized a multifaceted view of effectiveness with achievement test scores of students as just one aspect of the measurement process (Judith & Frederick, 1987, 34).

2.3 School effectiveness-enhancing factors

As stated earlier, school effectiveness is difficult to conceptualize, due to its complicated nature. It deals with multifaceted factors, including administrative functioning, leadership behaviour, morale, level of trust, culture and climate, parental involvement, community support, teachers' efficacy, commitment, loyalty, and teachers' satisfaction (Uline, Miller, & Tschannen-Moran, 1998, p. 462.). A recent study conducted by Sammons (2007, p. 23) also reveals that in the last 30 years, some common features that have led to school effectiveness include; achievement oriented teachers with high expectations, sound educational leadership, equal opportunity to learn, parental involvement, and good classroom management, etc. Clearly, measuring school effectiveness requires us to look at instructional effectiveness or students' achievement scores as a subset of a bigger concept of school effectiveness (Judith & Frederick, 1987, p. 10). Below are reviews of literatures of factors associated with school effectiveness.

2.3.1 Classroom instruction and students' learning

Equal opportunity to learn
Opportunity to learn refers to "national guidelines and rules with respect to the development of the curriculum, the school working plan and the activity plan at the school level, for example through a national curriculum" (Teddlie & Reynolds, 1999, p.

289). Really, the provision of the subject matter, which is determined by the ministry of education, the school, and the school board, influences how curriculum priorities are set (Scheerens & Bosker, 1997, p. 109).

Consistent with Herman, Klein, and Abedi (2000, p. 16), the concept of opportunity to learn operationalizes what happens in school and classroom with the principal aim of promoting the student's learning and progress in relation to both the performance and content standards set by the state. In other words, the national curriculum should be appropriately planned and correspond to the standards set, in order to provide students the opportunity to perform. Furthermore, the content to be taught should be in conformity with the test items used to assess students' achievement (Scheerens & Bosker, 1997, p. 110). In this sense, students should not be assessed on items that have not been used in the classroom as asserted by AERA, APA and NCME (1999, p. 76); besides, some tests demand students to work with materials which they have not seen before.

Students' achievement increases when they are provided with greater opportunities to learn (Benavot & Amadio, 2004, p. 8). In other words, students tend to be highly motivated to perform when all the needed opportunities and support have been provided them. Again, opportunity to learn provides information to policy makers to assess the implementation and the eventual effects of the national curriculum. Above all, it enables schools and teachers to respond positively to a new assessment by adjusting their curriculum and strategies that will eventually provide students opportunities to learn what is expected from them (Herman et al., 2000, p. 17.).

The importance of effective learning time cannot be over-emphasized when ensuring school effectiveness (Scheerens & Bosker, 1997, p. 125). Likewise, Teddlie and Reynolds (1999, p. 146) consider the appropriate use of instructional time as one of the crucial determinants of effective teaching. That is, efficient learning involves how students use their time judiciously at school and at the classroom level (Lezotte, 2001, p. 7; Scheerens & Bosker, 1997, p. 125). Studies show that maximizing instructional time with students improves their performance (see e.g. Teddlie & Reynolds, 1999, p. 146; Fuller & Clarke, 1994, p. 131; Sammons, Hillman & Mortimore, 1995, p. 28; Gillies & Quijada, 2008, p. 11).

Furthermore, in order to enable students to attain the mastery level of the curriculum objectives and goals, they must spend enough time on them (Lezotte, 2001, p. 7). Teachers and administrators are therefore advised to "balance issues of increasing curricular demands with limited instructional time" (Kirk & Jones, 2004, p. 4). Again, teachers are encouraged to manage time actively and efficiently and not only spend time on the cognitive objectives but also on personal relationships and affective objectives (Sammons et al., 1995, p. 29). With regard to classroom management, cordial relationship should exist in the classroom between both teachers-students and student-student. Furthermore, as part of classroom management duties, teachers must ensure order and good working attitudes from students in and outside the classroom (Scheerens & Bosker, 1997, p. 123.).

Student-teacher ratio

Ehrenberg, Brewer, Gamoran and Wilms (2001, p. 2) describe the student-teacher ratio as "a global measure of the human resources brought to bear, directly and indirectly, on children's learning". Recent studies confirm that reducing the class size and student-teacher ratio would raise quality education and improve students' performance (Dahar & Faize, 2011, p. 94; Diaz, Fett, Torres-Garcia & Crisosto, 2003, p. 2; Fuller & Clarke, 1994, p. 131; Ankomah et al., 2005, p. 8) and Tobin, Wu and Davidson (1987, p. 533) perceive school to be best, when there is a smaller student-teacher ratio.

Researchers also admit that reducing the student-teacher ratio has a huge effect, particularly in developing countries (Fuller & Clarke, 1994, p. 131; Gillies, & Quijada, 2008, p. 11). Moreover, a study indicates that the total number of students in a classroom has potential influence on the degree of learning that occurs (Ehrenberg, Brewer, Gamoran & Wilms, 2001, p. 1), hence, the lower student-teacher ratio, the more effective teaching and learning (Gillies, & Quijada, 2008, p. 11). Consequently, students in a class affect the social behaviour of students, particularly how they interact with each other. Again, studies show that where there is a small number of students, there is also good classroom management (Ehrenberg, Brewer, Gamoran & Wilms, 2001, p. 1.). Thus less student-teacher ratio mostly results in less noise in class and enables teachers to perform effective activities (Diaz et al., 2003, p. 2). Staunch supporters of less student-teacher ratios further assert that it provides teachers the

opportunities to focus on individual students and assign specific roles for students to perform. What is more, studies prove that there is a strong teacher effectiveness in smaller classes (Ehrenberg, Brewer, Gamoran & Wilms, 2001, p. 1; Diaz et al., 2003, p. 2.). For instance, it provides teachers the option to vary their teaching methods and assessment (Ehrenberg, Brewer, Gamoran & Wilms, 2001, p. 1). Dahar and Faize (2011, p. 97) find it easier for teachers to teach, evaluate and provide healthy feedback when the number of students in a class is small. Finally, it is also worth noting that small class size and student-teacher ratio provide a high degree of contact between students and teachers (Tobin, Wu & Davidson, 1987, p. 533).

Fair distribution of teaching learning materials

Teaching learning materials are educational-related resources, including textbooks, audiovisual equipment, classrooms, etc. (Gillies & Quijada, 2008, p. 11.) Clearly, achieving school effectiveness largely depends on the availability of learning materials (Djangmah, 2010, p. 3; Gillies & Quijada, 2008, p. 11). Besides, there is a greater impact on learning with students who have access to learning materials such as textbooks and computers in their homes (Gillies & Quijada, 2008, p. 11.) A study indicates that students provided with teaching-learning materials excel compared to those with inadequate materials (Fuller & Clarke, 1994, p. 127–128). Therefore, Venezia and Maxwell-Jolly (2007, pp. 8–15) seek to determine, if resources are distributed equally among schools and communities to achieve the set standards.

Meanwhile, Ankomah et al. (2005, p. 11) assert that the difference on the effects of teaching and learning materials in schools between developed and developing countries is relatively high. The authors also contend that educational facilities have marginal effects on countries that have reached a high level of education, whereas lack of these facilities has a huge effect on achieving quality of education in countries such as Ghana. Moreover, it is evident that the availability of textbooks and supplementary reading materials form part of the essential commodities in students' achievement in most developing countries (Fuller & Clarke, 1994, p. 127).

2.3.2 Teachers' development and working conditions

Teacher's development

Professional development simply means developing a person to perform his or her professional role. Teacher's development therefore is referred to as the growth gained by a teacher throughout his teaching experience (Villegas-Reimers, 2003, p. 11.). It has been noticed that factors closely related to teachers turn to mostly affect students than those that are far from them (Teddlie & Reynolds, 1999, p. 146). Therefore, proponents in the field of education concede teacher quality as critical in ensuring quality of education in every nation (Nwamuo, & Izuagba, 2010, p. 116; Ankomah et al., 2005, p. 9; Bishay, 1996, p. 147). Teacher's development is an essential commodity to improving students' performance. Villegas-Reimers (2003, p. 21) reveals that teacher's development affects the student's learning and that the more knowledge the teacher acquires in his or her profession, the higher student achievement is. Fuller and Clarke (1994, p. 129) observe that teachers' knowledge on the subject matter and their verbal proficiencies maintain to have a huge impact on students' achievement.

In order to sustain and improve on the performance of teachers, there should be regular in-service training for all teachers. Certainly, in-service training is prominent in teachers' career development (Fuller & Clarke, 1994, p. 129–130). Ankomah et al. (2005, p. 9) also contend that not only do teachers depend on observable and stable indicators but also the quality of training they acquire. However, experts in the school effectiveness advocate for the need for teacher development to be a school based (Sammons et al., 1995, p. 50). For instance, in-service training should be well-organized and be related to the core mission of the school in order to ensure school effectiveness. "Clearly a close synchronization of school developmental priorities with the site based developmental activities, and the generation of a staff culture which involves mutual learning, monitoring and commitment to collaboration are all likely to be important" (Teddlie & Reynolds 1999, p. 150.).

Achievement orientated teachers with high expectations.
Achievement orientation mainly determines what students are worth for, based on the aptitude and the environment within which they are living. It comprises of a stronger curriculum which highlights on basic subjects, in particular, pedagogical aims, including personal, cultural and social development, and also focuses on progress made in the previous years (Scheerens & Bosker, 1997, pp. 101–102.). Lezotte (2001, p. 6)

acknowledges that in an effective school, there is an existence of high expectation, where teachers demonstrate and believe that all students can master the school's essential curriculum whiles exhibiting their (teachers') capabilities to help a student obtain that mastery. Indeed, a study reveals schools that have attained high level with students place a high emphasis on the essence of raising standards and the belief that all students can succeed (Sammons, 2007, p. 10). Achievement orientation also helps in establishing a school's policy, which is aimed at maximizing competency objectives for all students. Hence, goals and objectives of the school must be clearly stated and defined prominently to students (Cotton, 1995, p. 20). In the words of Scheerens and Bosker (1997, p. 102), a school with highly stated and elaborated expectations motivates both its teachers and students towards attaining high performance.

Scheerens and Bosker (1997, p. 102) assert that teachers' performance largely affects pupils' high achievements, which in turn ignite school effectiveness. Thus, Lezotte (1991, p. 2) urges teachers to develop a broader array of responses by adopting strategies of reteaching and regrouping, and this can be manifested when the concept of high expectation is reflected after implementation. Moreover, teachers are advised to stimulate students to reach the ultimate by regular assessment and rewarding students for their outstanding performance and good progress at each high level of achievements. The school as well needs to keep records of achievement of students and successful events appropriate to compare itself with other schools as well as earlier performances (Scheerens & Bosker, 1997, p. 102.). In short, the success of high expectations will not only be judged by the initial staff beliefs but also be the response of the organization concerning why students do not learn. For instance, "if the teacher plans a lesson, delivers that lesson, assesses learning and finds that some students did not learn, and still goes on to the next lesson, then that teacher didn't expect the students to learn in the first place. If the school condones through silence of that teacher's behavior, it apparently does not expect the students to learn or the teacher to teach these students" (Lezotte, 1991, p. 2.).

Good cohesion among staff
 "A recurrent definition of a cohesive society was one in which everyone can 'get along with' other people" (Rowe, Horsley, Thorpe, & Breslin, 2011, p. 9). Indeed, consensus

and cohesion among teaching staff enables them to broaden their skills and achievement orientation (Scheerens & Creemers, 1989, p. 698). Not only does cohesion enhance teachers' skills but also supports conditions for high productivity (Scheerens & Creemers, 1989, p. 701). Due to the crucial role that cohesion plays in teachers' development, Scheerens and Bosker (1997, p. 108) submit that cohesion among staff should not be taken for granted in ensuring school effectiveness. Consequently, Scheerens and Creemers (1989, p. 703) concur certain structures to be submitted to facilitate shared adaptation and communication between teaching staff in order to establish good and effective cohesion.

The school must organize regular formal staff meetings (Scheerens & Bosker, 1997, p. 108) and promote teachers' continual learning and expertise (Kohler, Crilley, Shearer & Good, 1997, p. 240). Studies indicate that teachers need to collaborate to foster their pedagogical skills and competencies (Kohler et al., 1997, p. 240; Scheerens & Bosker, 1997, p. 108). Kohler et al. (1997, p. 240) also admit that students' learning needs and capabilities are well addressed when teachers are provided with opportunities to improve on their work, learning and interactions.

Again, teachers' satisfaction in relation to cooperation and respect from their colleagues is very essential to building consensus and cohesion (Scheerens & Bosker, 1997, p. 109). Teachers should endeavour to have healthy professional dialogue to discuss their own teaching with aim of facilitating good reflective practices (Glatthorn, 1987, p. 31) and also to discuss other issues of common interest that will lead to professional competence and school improvement (Scheerens & Bosker, 1997, p. 109). Kohler et al. (1997, p. 240) believe that through dialogue teachers are provided the opportunities to observe and support each other, share companionship, feedback and equal assistance to one another. Additionally, in order to grow professionally, Glatthorn (1987, p. 33) concedes teachers to be encouraged to consult each other, mainly to create concern for learner's outcomes.

Moreover, teachers cooperate among each other to enhance the guided national or district curriculum (Glatthorn, 1987, p. 32). Likewise, Scheerens and Bosker (1997, p. 109) recommend teachers to bring on board students' learning and satisfaction as well as look into the prospects of the curriculum. More especially, the curriculum development plan, if well conducted (by teachers), can increase teachers' cohesiveness

by bringing them together towards attaining common goals and also enable them to share ideas about teaching and learning (Glatthorn, 1987, p. 33). It is believed that team work among teachers fosters understanding, co-operation and professional development (Crow & Pounder, 2000, p. 217). In short, teachers must build a professional community where they share a common view on the school's mission, mutually reflect on instructional practices, corporate, engage in reflective dialogue, and provide one another with feedback on teaching activities, all with a focus on student learning (Lomos, Hofman & Bosker, 2011, p. 112).

Teachers' job satisfaction

Job satisfaction in general is simply "how people feel about their jobs and different aspects of their jobs…it is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs" (Spector, 1997, p. 2). Again, Michaelowa (2002, p. 5) in a more pragmatic manner describes job satisfaction as an indication of whether or not they like their job. Specifically, Zembylas and Papanastasiou (2004, p. 359) refer to teacher's job satisfaction "as teacher's affective relation to his or her teaching role and [it] is a function of the perceived relationship between what one wants from teaching and what one perceives it is offering to a teacher". In general, Morse (1977, p. 28) relates job satisfaction to individuals and their desires and contends that "the greater the amount the individual gets, the greater his satisfaction and, at the same time, the more the individual still desires, the less his satisfaction". In that case, the more an individual desires and is getting, the less he or she becomes satisfied. Alternatively, Evans (1998, pp. 4–5) describes job satisfaction as individual fulfillment of wants and illustrates on the fact that job satisfaction varies with the extent of the needs and how the individual becomes satisfied in a given job. Another school of thought focuses job satisfaction on expectation instead of needs and further explains that the individual in this sense looks forward to receiving what rightfully belongs to him/her for a job done (Evans, 1998, p. 5). Overall, Evans (1998, p. 20) propounds the determinants of job satisfaction to mainly include the individual's needs and expectations' fulfillments.

Recent studies conducted indicate a positive correlation between teacher's job satisfaction and students' achievements (e.g. Patrick, 2007, p. 135; Michaelowa, 2002, p. 20 & Hongying, 2007, p. 11). However, Bishay, (1996, p. 147) finds it very

disturbing that many teachers are dissatisfied with their jobs. This is because among the principal contributive factors to job dissatisfaction, as per teachers' observation, is poor pay (Zembylas & Papanastasiou, 2006, p. 231). In any case, Evans (1998, p. 1) reveals that when one seeks the public view on how to raise teachers' moral in order to satisfy them, the answer the majority will provide is certainly salary/pay increment. However, there is no clear evidence that an increase in teachers' salaries automatically increases students' performance. Rather, teachers should exhibit their willingness and desire to teach effectively (Michaelowa, 2002, p. 23.). Day (2007, p. 1) admits that no educational reform can be successful without teachers' commitment, and no school can be improved without teachers committing themselves to it.

2.3.3 Effective educational leadership

Lezotte (2001, p. 4) contends that schools are one of the complex organizations that require quality leadership. However, every study conducted on school effectiveness indicates leadership as the main important factor, with the headmaster being the focal element. Yet, there are no agreed definitions on the concept of leadership (Bush, 2003, p. 5) and therefore its definition is based on one's perception on it. Notwithstanding, leadership refers to people who take care of others' motivation and actions in order to achieve set goals (Bush, 2003, p. 5).

In an effective school, there is a clearly stated mission which the staff share and understand, which includes the school's goals, assessment procedures, and accountability, besides, Lezotte (2001, p. 4) admits that "the role of the headmaster as the articulator of the mission of the school is crucial to the overall effectiveness of the school". In other words, school leaders primarily help develop the visions and goals of the schools and inspire others towards the attaining of those goals (Leithwood & Riehl, 2003, p. 3). The school leader must, as a result, have a clear view of how to manage the school to achieve the best results and have a considerable discretion in the running of the school (Scheerens & Bosker, 1997, p. 103). From the perspective of Coulter and Wiens (1999, p. 4) educational leadership requires leaders to become clear about what is meant by education by preparing people to good worthy lives. Not only that, educational leadership also requires the unification of the people around key values, including personal, self-awareness, emotional and moral capabilities (Bush, 2003, p. 6).

Additionally, the headmaster is responsible for recruiting quality teachers, initiating new policy, and new curriculum along with introducing new teaching methods (Scheerens & Bosker, 1997, p. 103).

Furthermore, the headmaster acts as an instructional leader and collaborates effectively with staff, parents, and students (Lezotte, 2001, p. 4). The school leader also serves as a mediator between the school and the administration board, parents and the community at large (Scheerens & Bosker, 1997, p. 103). Indeed, since accountability mechanisms enable educational stakeholders to have a greater voice, concerning the governing of the school, educational leaders must adopt strategies of involving others in the day-to-day affairs of the school (Leithwood & Riehl, 2003, p. 5). Subsequently, the headmaster has a significant role in dissimilating the goals, programmes and progresses through the school to the community (Chapman & Burchfield, 1994, p. 404). If so, the school leader must provide quality information to and from the administration board, parents, teachers, students, community, etc. (Scheerens & Bosker, 1997, p. 103) and should encourage family educational cultures by ensuring that there is an existence of trust and communication between the school and the community (Leithwood & Riehl, 2003, p. 7).

Educational leaders provide an opportunity for the staff to partake in the decision-making process and admit the importance their knowledge (Leithwood & Riehl, 2003, p. 5). Scheerens and Bosker (1997, p. 103) suggest that decisions of the school should be taken on the basis of a sound and well-informed evidence and advise school leaders not to make a decision alone but share some responsibilities among the staff. Obviously, the earlier concept of leadership where the headmaster was seen as the main instructor has faded; hence, Lezotte (1991, p. 3) describes the role of a headmaster as "a leader of leaders" and not the usual "leader of followers" with the prime objective of creating a "community of shared values". In short, the running of the school must not be the sole responsibility of the school principal; rather, there should be roundtable discussion as to the governing of the school. Engaging teachers in the decision-making process stimulates school effectives (Scheerens & Bosker, 1997, p. 103.).

According to Hallinger and Heck (1998, p. 169), 31 out of 41 studies conducted in the 1980s describe the role of a principal in school effectiveness and define it as being an instructional leadership; however, since 1990, there has been an evolutional trend of

education reforms, and this revolution has led to a tremendous shift of leadership model and concepts. The review of School Effectiveness Research (SER) proposes a greater emphasis to be given to developing and creating a school system that supports collaboration and creates a culture for learning with high expectations, in order to improve the performance of schools (Sammons, 2007, p. 14). The school principal does not only give instructions to the teachers but also facilitates the teaching and learning process and is aware of students' progress to enable him/her set teaching priorities, modification of the curriculum and placing of student's ability groups (Scheerens & Bosker, 1997, p. 104). It is evident that collaboration and caring among students in a school are very crucial to engaging and motivating students' learning (Leithwood & Riehl, 2003, p. 6). Again, the school leader must be willing to discuss his or her pedagogical roles with the teachers and establish a good relation with teachers. Furthermore, the office of the principal should always be open for discussions, especially on how teachers could optimize instructions. Ultimately, the school leader must also encourage teachers to approach him/her with their problems and provide teachers regularly with output on their work and, if appropriate, find the best possible ways to increase performance (Scheerens & Bosker, 1997, p. 104.).

2.3.4 Community/parents involvement

Pundits in the field of education believe that the schools and classrooms do not operate in isolation and, therefore, acknowledge the need to locate schools within a wider society (Dunne, Akyeampong, & Humphreys, 2007, p. 47). In building a good partnership between the school and the community, Kirk and Jones (2004, p. 5) suggest the school should not only educate its students but also include parents as part of the school's family. United Nations Children's Fund [UNICEF] (2009, p. 2) reiterates this assertion that learning does not only occur in schools but also everywhere and at all times throughout life. In practice, students are engaged in a process of bridging the school, the home and the communities; for instance, students take what they learn in schools near their homes such as knowledge, practices, behaviours, attitudes and skills. Likewise, they take to school what they have learnt in their homes in form of community beliefs, practices, knowledge, expectations and behaviours (UNICEF, 2009, p. 5.). Lezotte (2001, p. 6) is confident that it is much easier for a school to achieve a

higher performance if parents form part of the collaborative team and are perceived by the school as partners in educating their kids. On the other hand, Anderson-Butcher et al. (2008, p. 4) agree that the responsibility of students' outcomes lie in the hands of all community stakeholders. In fact, many researches prove that support and co-operation between schools and homes have positive effects on students' learning (e.g. Sammons et al., 1995, 47; Cotton, 1995, p. 33; Leithwood, & Riehl, 2003, p. 7; Jordan, Orozco & Averett, 2001, p. 17; UNICEF, 2009, p. 10). Besides, community involvement in schools increases access and improves quality education (Dunne et al., 2007, p. 47). Indeed, parents' involvements have a huge influence not only on the cognitive but also on the social development of students (Driessen, Smit & Sleegers, 2005, p. 510). Therefore, the school must make it a point to often get in touch with parents concerning students' performance and progress (Scheerens & Bosker, 1997, p. 121).

In order to connect parents to school, Cotton (1995, p. 33) advices schools to offer parents various activities. Definitely, there are diverse ways that schools can involve or connect to their communities. Driessen et al. (2005, p. 510) observe cooperation between schools and parents from two main perspectives; school-initiated and parent-initiated parental involvement. With regard to school-initiated involvement, the school must involve parents through School Management Committees [SMCs] and Parent-Teacher Associations [PTAs] (Dunne et al., 2007, p. 31). Such committees and associations allow full participation and communication with parents and create opportunities for parents to follow the progress of their children (UNICEF, 2009, p. 10). Another means to facilitate parents' participation is to use local language as the language of instruction. This increases the likelihood of parents' involvement and improves retention and achievement (Dunne et al., 2007, p. 27).

Studies indicate that parental involvement can also be accelerated when they form part of the school's decision-making process and policymaking (Scheerens & Bosker, 1997, p. 121; Dunne et al., 2007, p. 48). In addition, in an effective school, parents play significant roles in helping to achieve the mission of the school (Lezotte, 2001, p. 6). Actually, parents understand and support the mission of schools and are involved in attaining this mission (Lezotte, 1991, p. 6). One prominent thing to encourage parental involvement in school is the location of the school. It guarantees parents of their children's safety, as parents are mostly reluctant to send their kids to schools that are far

from their communities, particularly at the secondary school level (Dunne et al., 2007, p. 27.). On the part of parent-initiated involvement, families are to help realize the goals of the school and ensure to provide guidance and support to their kids by establishing what is termed as "family educational cultures". In other words, families must provide time for their children's homework, ensure their children are healthy and ready to learn and have high expectations for their kids' learning (Leithwood & Riehl, 2003, p. 7.). Likewise, parents' involvement in schools helps expand students' learning time by supervising their home works (Sammons et al., 1995, p. 49).

Overall, both the school and the community benefit enormously from creating a healthy partnership. For instance, students get involved when their parents provide financial support to the development of the school, whereas the school indicates commitment and is accountable for the community (Dunne et al., 2007, p. 30). Similarly, parents and communities must ensure to support and invest in schools to promote education. On the other hand, schools must be obliged to serve the communities, care and protect students and be held accountable to the communities (UNICEF, 2009, p. 4.).

Moreover, parental involvement enhances social competence, student behaviour, motivation, student-teacher and peers relations (Jordan, Orozco & Averett, 2001, p. 18; Driessen et al., 2005, p. 514; Chapman & Burchfield, 1994, p. 404) and has a great impact on students' attendance and aspirations for further education (Jordan, Orozco & Averett, 2001, p. 18; Sammons et al., 1995, p. 49). A study also reveals that parent involvement in education affects positively on student truancy behaviour and inspires them on their decision to further education (Driessen et al., 2005, p. 514). It as well addresses barriers to learning and provides access to physical health services, as well as other social services for students and their families, and provides new learning opportunities for students in various settings, including church congregations, after school programmes and community organizations (Jordan et al., 2001, p. 18). Additionally, parental involvement increases teachers' commitment to task, promotes cohesion, encourages more time for collaboration, creates a climate of openness to innovation, trust, caring, opportunities for professional development and supportive leadership (Leithwood & Riehl, 2003, p. 6).

Parent/community involvement in education has an influence in school reform efforts. Parents play crucial roles in reform efforts, such as reform advocates, full reform partners and reform participants, noting that the community serves both as resources and a catalyst for change (Jordan et al., 2001, p. 19). In many developing countries including Ghana, communities are encouraged to support teacher's salaries both in cash and in kind, supply instructional materials, build furniture and help maintain school facilities (Chapman & Burchfield, 1994, p. 404). Community involvement also brightens the climate of schools and provides more open school culture. Besides, through effective school-community partnership, schools receive human resources in terms of local teachers, trainers for teachers and management assistance (Jordan et al., 2001, p. 19).

Parental involvement in education does not only benefit students and schools, but parents also have their share. Parents acquire positive attitudes towards school and their children's educational welfare. It also influences the change capacity of schools and their communities by cementing and establishing strong ties between these two parties (Driessen et al., 2005, p. 514.). Jordan et al. (2001, p. 20) concede that parents positively influence school when they assign special roles to make changes. More so, community participation enables parents to hold the school accountable for students' performance (Anderson-Butcher et al., 2008, p. 4). McNamara (2010, p. 1) suggests that "school programs, policies, and curricula could be tailored to local needs and specificities, with parents holding decision makers more accountable".

Finally, Driessen et al. (2005, p. 510) contend there are some overlapping spheres of influence to define the cooperation between parents, teachers and schools; for instance, some refer to it as parental involvement, others refer to it as parental participation, school-family relations, educational partnership etc. However, in this study, these terms are used interchangeably and have the same contextual meaning.

3   RESEARCH DESIGN

This chapter deals with the research approach used in conducting this study. It starts off with a brief description of the selected research method and some reasons for choosing the approach. It will further describe how data was collected and who the participants were and how they were selected for the data collection. Finally, this chapter will provide a detailed explanation as to how the data was analyzed.

3.1   The aim of the study and the research questions

The Ghanaian educational system has gone through a great deal of reforms lately. In 1987, Ghana embarked upon a major reform, which was identified as the most striving programme of education systems in the entire West Africa. The idea of the implementation of these reforms was to ensure quality of education throughout the country. However, the Ghana education sector has not reached the ultimate goal of giving its citizens the quality of education they need (Akyeampong, 2004, p. 3.) and this has clasped the concern of every Ghanaian. Unfortunately, most educational pundits in Ghana perceive students' performance in a standardized examination as the sole means of high standards. However, it is evident that the quality of education also includes some non-measurable outcomes, which need to be urgently tackled (Ankomah et al., 2005, p. 6). Besides, activities within the school extremely depend on what educational stakeholders bring to bear (Fertig, 2000, p. 395). Thus, the study is aimed at *finding appropriate means of raising educational standards in Ghana.*

Moreover, achievement test score is being operated as a key definition to educational achievement, and raising the scores has been appended to education improvement. In other words, the general public, the media, and the politicians view achievement test performance as an academic effectiveness indicator (Haladyna, Nolen & Haas, 1991, pp. 2-6.). Nevertheless, measuring school effectiveness requires us to look at students' achievement scores as a subset of a bigger concept of school effectiveness (Judith & Frederick, 1987, p. 10). In other words, an effective school adds value to its students' outcomes by considering other contributive factors (Sammons, 2007, p. 13). Hence, the first research question in this study is *which factors contribute to high students' performance?*

Additionally, the study endeavours to the full participation of educational stakeholders including students, teachers and parents. Fertig (2000, p. 395) asserts that activities within the school extremely depend on what educational stakeholders bring to bear. Further, educational stakeholders have a divergent view in terms of issues relating to academic standards. For instance, Ghanaian teachers usually expressed concern about a wide gap between what parents say regarding the importance of education and what they do to support their children in school (Donkor, 2010, p. 31). On the other hand, a study demonstrates that educational stakeholders consider school–community partnership as a positive and important factor in their respective spheres of interest (Anaxagorou, 2007, p. 53). Therefore, the second research question in this study is *what are the perceptions and expectations of stakeholders in ensuring high academic standards?*

Furthermore, effective school leadership remains paramount to issues concerning school improvement and effectiveness. As a result, there have been a number of studies that have been looking at what really constitutes effective school leadership. Meanwhile, little research has been conducted on how and in what ways students, teachers and parents perceive effective school leadership (Odhiambo & Hii, 2012, pp. 232-233.). Besides, a study reveals that the concept of leadership has no agreed definition and can be defined based on one's perception on it (Bush, 2003, p. 5). Consequently, the third research question in this study is *how do teachers, students, and communities perceive school leaders?*

3.2 Operationalization of the research questions

One core indicator was operationalized in data collection conducted for this study. That is, to examine appropriate means of raising educational standards in Ghana. This study was hypothesized from two major stands: first, that there is more to school effectiveness than just students' test score. Besides, what really triggers the so-called educational falling standards? This hypothesis, therefore, is characterized by teacher effectiveness, quality teaching, effective classroom instruction and leadership. The second hypothesis is that developing an effective partnership between schools and communities will enhance students' performance and is also characterized by cooperation among stakeholders such as students, teachers, headmasters, parents and communities at large.

Additionally, data collected for this study was classified into three main variables, including classroom instruction and students' learning, teacher development and working conditions, and effective school-community/parent partnership. To begin with, classroom instruction and students' learning included eight (5-Likert) items in the questionnaire and sort to gather information from statements, such as: there are sufficient supply and availability of teaching and learning materials in the school; the school is very open to curriculum changes; academic standards are considered in the planning and development of curriculum; students actively participate in planning, evaluating and taking responsibilities in the learning process; special teaching services are available to students with special needs; classroom instruction focuses on the desired students' outcomes; students have textbooks/internet access to learn at home; career guidance officer helps students in selecting their courses. Likewise, open-ended questions – such as: briefly discuss the factors which play an important role in school effectiveness, what do you think can be done to improve your academic performance and what support would you give in order to improve your children's as well as the school's performances – were considered for this section (see appendix A). Moreover, this variable was measured using descriptive analysis and an independent sample T-test statistical technique.

Regarding teacher development and working conditions, the questionnaire included eight (5-Likert) items, such as: teachers are encouraged to be innovative, teachers are competent in methods and in the use of ICT, teachers discuss their lessons

and teaching strategies with each other, students respect and behave well towards their teachers, teachers' professional skills are well developed, teachers and students are well motivated towards academic achievement. Analysis of variance (ANOVA) or multivariate and independent sample t-test was used to measure teacher's development and working conditions.

Moreover, four 5-Likert items from the survey sought to provide the answer to effective leadership; they included: the headmaster often has personal interaction with teachers; the headmaster treats all students, staff and parents with respect; teachers and students are assigned leadership responsibilities in the day to day affairs of the school; open and fair administrations are operated in the school (refer to appendix A). Again, ANOVA and independent sample t-test was used to determine the effects of an effective leadership in the schools.

Lastly, the questionnaire provided nine (5-Likert) items that touched on effective school-community/parent partnership. The items were: goals and aspirations of the school are discussed with teachers, students and parents; the school organizes community based programmes; parents are involved in making decisions on students' learning; regular parent-teachers association meetings are held towards the development of the school; the school principal communicates effectively with community; parents are welcome to visit the school anytime; parents take good responsibilities in students' educational needs; parents encourage students in their personal studies; and how can the school increase the participation of parents in the school events as well as its curriculum implementation (see appendix A). Once more, ANOVA and independent sample t-test was used to measure school-community partnership.

3.3   Data and data collection

A quantitative research approach was used for this study. For this reason, a brief review on quantitative research will be discussed. A quantitative research is an approach "to the conduct of social research which applies a natural science, and in particular a positivist, approach to social phenomena" (Bryman, 1984, p. 77). Sale, Lohfeld and Brazil (2002, p. 44) contend that quantitative research allows for independent entities where there are no or limited interferences during the study from both the investigator and the

investigated. Quantitative research is a type of research that normally deals with statistics and numbers. A quantitative research is "explaining phenomena through numerical data collection process that are analyzed using particularly statistics (Muijs, 2004, p. 1). A quantitative research was carried out due to the research questions of the study, which seek to demand a wide range of knowledge from a large group of ten schools in the Ashanti region of Ghana.

3.3.1 Population and sample

The data collection of the research took place in the Ashanti region of Ghana in autumn 2011. Ashanti region was selected due to its dominance in terms of the total population of schools in the region. Besides, Cohen, Manion and Morrison (2000, p. 102) argue that it is more convenient to select from a sample that is easy to access, yet I chose Ashanti region specifically because of easy accessibility and proximity.

At the moment, there are 700 senior high schools in Ghana (International Organization for Migration [IOM], 2011, p. 22), out of which the Ashanti region possesses approximately 110. Moreover, there are about 17 districts within the region, and since school effectiveness is a global issue and the ultimate aim of every school is to raise academic performance of its students, six districts were selected for this study. These six districts were selected due to their proximities. In other words, I selected districts in order to avoid traveling at a far distance, which would have been very expensive and time consuming. Regarding the selection of schools and their performances, the West African Examination Council [WAEC] (2012) releases lists of senior high schools and programmes for the selection of new students who have graduated from the junior high schools. This booklet includes categories of schools from A to D, which indicate the highest to the least achievement schools. The criteria for the ranking of schools from A to D is based on the total number of students each school presented for the examination and the number of candidates who passed each subject. Ajayi (2011, p. 8) augments that the average percentage of students obtaining the pass grade for each subject is used as an index of academic performance of schools in Ghana. Based on the current list of schools provided by WAEC, ten senior high schools out of six districts were selected for the data collection, and these schools consisted of both high and low academic achievements' schools. Six of the schools

selected (SCH1, SCH2, SCH5, SCH7, SCH8, and SCH9) were in category A and B, which are classified under the high-performing schools, whereas the remaining four schools (SCH3, SCH4, SCH6, and SCH10) were low-performing under the category D. My intention for this selection was to acquire diverse ideas and knowledge-based information from participants.

In all, there were 200 participants in the data collection process. 15 participants came from each selected school. The 15 participants consisted of the headmaster and his or her two assistance; 6 teachers as well as 6 students were also selected randomly. 50 out of the 200 participants were chosen from parents within the community of which schools were situated. At the end of the survey I received a total of 197 responses, which constituted of 98 headmasters and teachers, 59 students, and 50 parents.

3.3.2   Questionnaire for the study

The questionnaires were set based on the research questions for the study with the aim of finding the appropriate means of attaining high academic standards in Ghana. Different questionnaires were administered according to participants. There were three groups of questionnaires namely: group A = School principal and teacher, group B = student and group C = parent (refer to appendix A).

The survey instrument consisted of three main sections. The first part sought to generally identify demographic information of respondents such as years of service, age, gender, educational background, marital status, financial status, number of teaching staff, total number of students in a school as well as teaching periods per day. It is worth noting that the number of questions asked for each category under this section differs. For instance, the first section for principals and teachers included some administrative questions that could not be answered by both students and parents. Moreover, some questions were intended for a particular group to answer (see appendix A).

The second part also comprised of rating scale items related to the various facets of school effectiveness. Rating scales enable researchers to build in a degree of sensitivity and acquire different responses whiles they continue to generate numbers (Cohen et al., 2000, p. 253). A Likert scale which was specifically used for this part of my questionnaire involves series of statements that require respondents to disclose a degree of agreement or disagreement (Albaum, 1997, p. 332). This method of rating

scale also provides a wider array of responses to a given statement or question. In this study, respondents indicated how strongly they agree with the given statements by circling between the scales 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly agree. The last part of the survey also consisted of two open ended questions for each group which was intended to get the subjective views of respondents regarding school effectiveness and students' performance. As Cohen et al. (2000, p. 245) emphatically state that respondents are not mere passive data providers and further contend that "they are subjects and not objects of research". Geer (1988, p. 365) also argues that open ended questions are mainly used by survey researchers to measure public opinion and that it allows respondents to answer questions in their own words and as a result produces in depth views of the inquiry. Again, open-ended questions provides information that might not be captured in the questionnaire and allow respondents to claim responsibility and ownership in the data collection process (Cohen et al., 2000, p. 254).

3.3.3   Conducting the survey

Prior to collecting the data for this study, a pre-information of my visit to the schools were made through personal contact with the headmasters of all ten schools to book appointments for the survey. During these meetings I presented both my letter of acknowledgement and research permit request to the headmasters. The headmasters then signed and issued them as circulars for every teacher to read and sign as well. After which the letters were filed for the purpose of future referencing and thereafter, favourable days and time were scheduled for the administering of the questionnaire.

Selections of participants were made with stately helps from the assistant headmasters (in charge of academics) of the schools. Available teachers as at the time of my appointment with each school were called upon randomly by the assistant headmasters to take part in the survey. Regarding students, every class in all Ghanaian schools have prefects and their assistant and basically, all student participants for the study were selected from these class prefects. On the part of the parents participants, the assistance headmasters in collaboration with teachers who were members of the Parent Teacher Associations (PTA) made some recommendations and also accompanied me to get in contact with those parents they have recommended. To begin with, brief

introductions were made and I was given the opportunity to explain the content and reasons for the questionnaires to the participants before distributing them to the participants for their responses.

During the data collection process, it was observed that some of the respondents were quite reluctant in answering the questionnaire on the same day and since ethically respondents are not obliged to complete the questionnaire (Cohen et al., 2000, p. 245), I was asked to come for their responses later. However, where I had the chance to be with the respondents, questions that were not clear to some of them were further explained for clarity and best responses.

3.3.4 Ethical considerations

Ethical issues in conducting research simply means researchers moral obligations to protect participants from harm, invasion of their privacy and ensuring that their well-being are protected (Drew, Hardman & Hosp, 2007, p 79). In the first place, Cohen et al., (2000, p. 53) recommend permission to conduct the research to be sought as early as possible. In this study, the ten selected schools were contacted and were informed of the research. Permissions were granted by the headmasters of the schools before I arrived in Ghana for the data collection. Besides, prior notice was given with regard to when the data will be collected in the various schools. Meanwhile, introductory letters provided by the Institute of Educational Leadership, University of Jyväskylä were also given to all the headmasters of the school beforehand.

According to Drew, et al. (2007, p 72) one traditional way of solving the issue of ethics is the use of anonymity, thus, disguising the identity of participants, institutions and locations. In this study, participants were guaranteed of the confidentiality of their responses and were assured that the data collected will be used for the sole purpose of my research. More so, the names of the ten schools withheld as well as their locations.

Finally, participants were reliably informed about the procedure in which the data will be collected and the purpose of which it will be collected. Instructions on how to answer the questionnaire were also provided for the participants to avoid any misunderstanding. This according to researchers will enable the participants to beware of the aim and methods to the study, the risks involved and what the study demands from them (e.g. Cohen et al., 2000, p. 50; Drew et al., 2007, p 79).

3.4 Data analysis

There is a variety of software packages that are used to analyze data in quantitative research (Muijs, 2004, p. 85), however, in this study, all data were analyzed using the SPSS software. Firstly, the ten schools were coded as SCH1 to SCH10, where SCH represented names of the schools and numbers one to ten represented the order of the schools. In a similar vein, cities where the schools are located were also given code names such as OB, OF, EJ, KE, KS, and AK. Also, codes like A, B and C were denoted for headmasters and teachers, students and parents respectively. Pallant (2011, pp. 12-13) contends that each item of every questionnaire must have a unique name which clearly identifies the information before it is entered into the SPSS software and further state that the identification could be abbreviated with both letters and numbers.

During the analysis process, a descriptive statistics were used first in to test the hypothesis that, there is more to school effectiveness than just students test scores. According to Brace, Kemp and Snelgar, (2003, p. 480) descriptive analysis is a statistical tool that provides the opportunity to accurately describe larger quantity of data to few values. The predictors for the hypothesis include availability and equal distribution of teaching-learning materials.

Furthermore, the independent sample T-test were used to measure equal opportunity to learn, student-teacher ratio, teacher's development, effective leadership, and school-community partnership in relation to performance of the schools. Consistent with Muijs (2004, p. 139) the t-test provides statistical significance by comparing the means on variables between two groups.

Another statistical approach known as ANOVA was also used to determine whether the respondent groups (headmasters and teachers, students, and parents) have similar perception in terms of teacher's development, effective leadership, and school-community partnership. Borg and Gall (1989, p. 557) define analysis of variance as "a statistical technique for determining whether several groups differ on more than one dependent variable".

It is important to note that items in the survey were grouped and computed under the three main variables (see appendix B). Prior to grouping and computing items in the survey, reliability analyses were made using Cronbach alpha. Cronbach alpha is define

as a general formula for checking scale reliability base on internal consistency (Lehman, 2005, p. 142, & Tavakol & Dennick, 2011, p. 53) and provides the estimation of reliability expected in an instrument (Lehman, 2005, p. 142). In this context, "internal consistency describes the extent to which all the items in a test measure the same concept or construct" (Tavakol & Dennick, 2011, p. 53). According to Gliem and Gliem (2003, p. 87) Cronbach's alpha reliability coefficient usually ranges from Zero (0) to one (1) hence, the nearer Cronbach's alpha coefficient gets to 1.0, the more the internal consistency of the items in the scale. In other words, the more the items in test are correlated to each other, the higher the value of alpha (Tavakol & Dennick, 2011, p. 53). Therefore, a good result of Cronbach's Alpha indicates a strong correlation of items (Lehman, 2005, p. 142). However, higher coefficient does not all the time warrant for higher internal consistency because can also be affected by the length of the test of the items (Tavakol & Dennick, 2011, p. 53).

Finally, open ended questions used in the survey were classified following the responses of respondents. These classifications were recorded separately and valued for "yes" or "no". In other words, respondents' responses were entered as yes or no depending on the classifications. Additionally, multiple response sets were defined for the classification made from the open ended questions using a dichotomy group tabulated at value 1 (see appendix C, D and E). However, most of the results were analyzed using the 5-Likert questions, except on few results such as availability of teaching learning materials and effective school-community partnership that both the open ended questions and the 5-Likert questions were used.

4 RESULTS

This chapter describes findings of the survey for this study based on the research questions and the theoretical framework. Mainly tables and charts will be displayed in describing the results of this study. To begin with, an overview of demographic data of the study will be discussed, followed by specific descriptions based on the research questions.

4.1 Schools and number of participants for the survey

Out of a total number of 200 questionnaires that were distributed to 10 schools and their communities in the Ashanti region of Ghana, 98.5% were retrieved for this study. Hence, 197 completed surveys were used instead of the anticipated 200 questionnaire. The schools were selected from districts within the Ashanti region; however, there were some cases where two schools were selected from one district or city. For instance, SCH1 and SCH2 as well as SCH4 and SCH5 were situated in the same city respectively. Cities with two schools represented 20% each of the total respondents. SCH7 SCH8 and SCH9 also were located in the same city and represented 29% of the number of respondents to the survey. The remaining schools, including SCH3, SCH6 and SCH10 were from different cities, each constituting 10%. Table 1 indicates all the ten schools, and the total number of participants used for the survey conducted in this study.

Table 1. Schools and number of participants in the survey

Name of schools	Number of participants	Percentage
SCH1	20	10.2
SCH2	20	10.2
SCH3	20	10.2
SCH4	20	10.2
SCH5	20	10.2
SCH6	19	9.6
SCH7	19	9.6
SCH8	20	10.2
SCH9	19	9.6
SCH10	20	10.2
Total	197	100.0

4.2 Demographic information

Data from the demographic information regarding the survey revealed that exactly half (50%) of the respondents had a bachelor's degree whiles 30% had some college certificates. About 10% of the participants also had other kinds of certificates. There were also 8% of participants who have obtained master's degree and a few of the participants representing 2% have their doctorates. Additionally, 9% of respondents were between the ages of 16 to 17 years. The next age group of participants representing 21% were between the ages of 18 and 24. Besides, almost half of the participants fall within the age ranges between 25 and 40 years. This implies that majority of the participants in this study were youth. However, 20% of respondents were between the ages of 41 and 45 whiles, 3% of respondents were 56 years or older. Below is table 2 showing the educational background and age range of the participants.

Table 2. Educational background and age range of the participants

Items	Number of participants	Percentage
Educational background		
Some college	60	30.0
Bachelor's degree	99	50.0
Master's degree	16	8.0
Doctorate	3	2.0
Others	19	10.0
Total	197	100.0
Age range		
16-17 years	18	9.0
18-24 years	41	21.0
25-40 years	46	47.0
41-45 years	19	10.0
46-55 years	19	10.0
56 years or older	6	3.0
Total	197	100.0

Furthermore, headmasters and teachers group of the survey showed that almost half (47%) of the respondents had less than three years of teaching service in their respective schools. Respondents constituting 27% have also been in the teaching service between three to five years. Again, 17% of the respondents had more than ten years of teaching service whereas, 9% had been in the teaching service ranging from six to ten years in their schools. Moreover, most of the schools (81%) have over 100 teaching staff members whereas, 19% had been teaching staff ranging from 50 to 74. Table 3 indicates the number of teachers and their teaching experiences in the schools.

Table 3. The number of teachers and their teaching experiences in the schools.

Items	Number of participants	Percentage
Years of service		
Less than 3 years	41	47.0
3-5 years	24	27.0
6-10 years	8	9.0
More than 10 years	15	17.0
Total	88	100.0
Teaching staff		
50-74	17	19.0
75-99	0	0
100 or above	71	81.0
Total	88	100.0

More so, the majority of the schools constituting 79% have more than 1201 of students' enrolment, 19% of the schools had students' enrolment ranging from 901 to 1200 and 2% students' enrolment between 701 and 900. Finally, nearly half (44%) of the students who participated were at the Senior High school level four (SHS4), 26% of the students were in SHS3 and 15% of the students were also in SHS2 and SHS1 respectively. Table 4 shows students' enrolment in the schools and classes of student participants.

Table 4. Students' enrolment in the schools and classes of student participants.

Items	Number of participants	Percentage
Number of students in school		
701-900	2	2.0
901-1200	17	19.0
1201 or above	69	79.0
Total	88	100.0
		(Table continues, p.45)

Students per class

SHS1	9
SHS2	9
SHS3	15
SHS4	26
Total	59

4.3 Classroom instruction and students' learning data

This part of the survey answers research question one, which sought to determine factors that contribute to high students' performance. In order to achieve the result, this section has been subdivided into the following: availability and equal distribution of teaching-learning materials, provision of equal opportunity to learn, and the student-teacher ratio.

Availability and equal distribution of teaching-learning materials

In this section, a descriptive analysis was used to determine whether the schools have sufficient teaching-learning materials at their disposal to ensure effective teaching and learning. The results revealed that more than half of the respondents from SCH1 and SCH2 strongly agreed or agreed to have adequate teaching-learning materials in their schools. Almost half of the respondent from SCH7, and SCH9 also strongly agreed or agreed to have sufficient teaching-learning materials. This implies that the high-performing schools mostly agreed to have adequate teaching-learning materials. On the contrary, more than half of the respondents from SCH3, SCH6, and SCH10 strongly disagreed or disagreed to have sufficient materials in their respective schools. This means schools that are not performing too well claim not to have enough teaching-learning materials. However, there was really no difference in responses from SCH4 and SCH5 regard whether or not they have sufficient teaching-learning materials in their schools. Generally, 45% of the total respondents consider having insufficient teaching-

learning materials in their schools. Table 5 indicates the ten schools, and respondents respond on sufficient supply and availability of teaching-learning materials.

Table 5. Location of schools and sufficient supply and availability of teaching

Schools	Cities of schools	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total percentage
SCH1**	OB	10.0%	45.0%	15.0%	20.0%	10.0%	100.0%
SCH2**	OB	20.0%	35.0%	20.0%	15.0%	10.0%	100.0%
SCH3*	OF	0.0%	10.0%	15.0%	40.0%	35.0%	100.0%
SCH4*	EJ	15.0%	25.0%	20.0%	30.0%	10.0%	100.0%
SCH5**	EJ	20.0%	20.0%	15.0%	20.0%	25.0%	100.0%
SCH6*	KE	5.3%	21.1%	10.5%	47.4%	15.8%	100.0%
SCH7**	KS	5.3%	42.1%	21.1%	26.3%	5.3%	100.0%
SCH8**	KS	5.0%	30.0%	15.0%	45.0%	5.0%	100.0%
SCH9**	KS	5.3%	42.1%	26.3%	21.1%	5.3%	100.0%
SCH10*	AK	5.0%	25.0%	10.0%	55.0%	5.0%	100.0%
Total		9.1%	29.4%	16.8%	32.0%	12.7%	100.0%

** = high performing school

* = low performing school

Besides, almost half (45%) of respondents responding to open-ended question 40 from headmasters and teachers' survey indicated that provision of teaching-learning materials contributes significant role in school effectiveness (see appendix C). Similarly, more than half (52%) of respondents responded to question 33 of the students' survey that teaching-learning materials can immensely improve students' performance (see appendix D). Again, more than half (67%) of respondents from the parents' survey are of the view that one prominent means of supporting and contributing to students' high performance is by providing effective teaching-learning materials (refer to appendix E). Overall, it is clear from the open-ended survey that all the respondent groups (headmasters and teachers, students, and parents) commonly perceive the provision of teaching-learning materials in schools as one of the major indicators of school effectiveness.

Provision of equal opportunity to learn

Moreover, an independent t test was used to determine whether there is a relationship between the performance of the schools and the provision of equal opportunity to learn

to students. In all, eight items were computed and used as the test variable. Using a scale of one, reliability statistics showed a Cronbach alpha of 0.843 on the selected items (see appendix F). This study found that, the high-performing schools had a statistically strong significant difference in the provision of equal opportunity to learn (M=24.71) compared to the low-performing schools (M=16.72); t (195)=2.89, p=0.000 (refer to appendix G for the independent sample Test). Therefore, table 6 below indicates that providing equal opportunity for all students to learn really does affect students' performance. Thus, the more students are provided with equal opportunity to learn, the higher their performances.

Table 6. Independent sample t-test on provision of equal opportunity to learn

	Performance of schools	N	Mean	Std. Deviation	Std. Error Mean
Equal opportunity to learn	Low	80	16.72	5.445	.503
	High	117	24.71	5.601	.626

P≤ 0.001*** =strongly significant, p≤0.01**= significant, p≤0.05*= almost significant

Student-teacher ratio

Furthermore, a one way analysis of variance (ANOVA) was used to compare the student-teacher ratio on the performances of the schools. There was a statistically almost significant difference among the scores for the student-teacher ratio and students from low-performing schools (M=1.25) and high-performing schools (M=1.50); F=8.600, p=0.004 (see appendix G). The result suggested that the student-teacher ratio actually did not have effect on the schools' performance. Specifically, this study submits that even the high achievement schools also have the problem of the high student-teacher ratio. Moreover, the results indicated that an increase in students' enrolment result in an increase in teachers. Table 7 describes and compares the student-teacher ratio on the basis of the total number of students and the total number of teaching staff in the schools.

Table 7. Student-teacher ratio based on the total number of students and the total number of teaching staff in the schools.

		N	Mean	Std. Deviation	Std. Error
Students-teacher ratio	Low	36	1.25	.000	.000
	High	52	1.50	.520	.072
	Total	88	1.40	.418	.045
Total number of teaching staff	Low	36	4.00	.000	.000
	High	52	3.35	.947	.131
	Total	88	3.61	.794	.085
Total number of students	Low	36	5.00	.000	.000
	High	52	4.60	.569	.079
	Total	88	4.76	.479	.051

P≤ 0.001*** =strongly significant, p≤0.01**= significant, p≤0.05*= almost significant

4.4   Teachers' development and working conditions

With regards to teacher's development and working conditions, two statistical approaches were deployed. First, an independent sample T-test was used to compare teacher's development and working conditions on the performances of the schools. A total of seven items from the survey was selected for teacher's development and working conditions. Using a scale of one, reliability statistics showed a Cronbach alpha of 0.857 on the selected items (see appendix F). Again, there was a statistically strong significant difference among the scores for the total number of teachers and students from low-performing schools (M=12.14) and high-performing schools (M=18.68); t (195)=10.159, p = 0.000 (see appendix G). It was discovered that teacher's development and working conditions obviously affect school effectiveness. The result suggests that teacher's development, and good working tend to produce quality teaching and high performance. Table 8 below shows the group statistics between high and low-performing schools on teacher's development and working conditions.

Table 8. Performance of schools and teacher's development and working conditions

	Performance of schools	N	Mean	Std. Deviation	Std. Error Mean
Teacher's development and working condition	Low	80	12.14	3.665	.339
	High	117	18.68	5.372	.601

P≤ 0.001*** =strongly significant, p≤0.01**= significant, p≤0.05*= almost significant

Furthermore, a one-way analysis of variance (ANOVA) was used to determine whether the respondent groups (headmasters and teachers, students, and parents) differs with regards to teacher's development and working conditions. There was a statistically almost significant difference between the groups as determined by one-way ANOVA (F=7.039, p=0.021; see appendix G). A Tukey post-hoc test revealed that the headmasters and teachers, and students groups have a statistically strong significant difference (p=0.001) in terms of perception on teacher's development and working conditions. However, there were no statistically significant differences between the headmasters and teachers, and parents groups (p=0.198) as well as between student and parent groups (p=0.215). This implies that parents' perception on teacher' development and working conditions differs from the perceptions of headmasters, teachers, and students. Table 9 below explains the multiple comparisons between the groups on teacher's development and working condition.

Table 9. Respondents views on teacher's development and workign conditions

Dependent Variable: Teacher's development and working conditions
Tukey HSD

(I) Respondent Category	(J) Respondent Category	Mean Difference (I-J)	Std. Error	Sig.
Headmasters and teachers	Students	3.340***	.894	.001
	Parents	1.625	.941	.198
Students	Headmasters and teachers	-3.340***	.894	.001
	Parents	-1.716	1.021	.215
Parents	Headmasters and teachers	-1.625	.941	.198
	Students	1.716	1.021	.215

P≤ 0.001*** =strongly significant, p≤0.01**= significant, p≤0.05*= almost significant

4.5 Effective leadership

Once more, an independent sample T-test was used to compare low and high-performing schools regarding effective leadership. A total of four items from the survey was selected and computed as efficient leadership. Using a scale of one, reliability statistics showed a Cronbach alpha of 0.864 on the selected items (see appendix F). There was a statistically strong significant difference between the scores for the low-performing schools (M=5.89) and high-performing schools (M=9.23); t (195)=7.124, p = 0.00 (see appendix G). Indeed, the result revealed that effective leadership is one of the enhancing factors to school effectiveness. Specifically, this study indicated that good and effective leadership tremendously improves the performances of the schools. Table 10 below shows the group statistics between high and low-performing schools on effective leadership.

Table 10. Performance of schools and effective leadership

	Performance of schools	N	Mean	Std. Deviation	Std. Error Mean
Effective leadership	Low	80	5.89	2.181	.202
	High	117	9.23	4.328	.484

P≤ 0.001*** =strongly significant, p≤0.01**= significant, p≤0.05*= almost significant

Moreover, a one-way ANOVA was used to determine whether the respondent groups (headmasters and teachers, students, and parents) differs with in relations to effective leadership. There was a statistically strong significant difference between the groups as determined by one-way ANOVA (F=20.322, p=0.000; see appendix G). A Tukey post-hoc test discovered a statistically strong significant difference between the headmasters and teachers and the students groups (p=0.000) and significant difference between the headmasters and teachers and the parents groups (p=0.002) in terms of perception on effective leadership. However, there were no statistically significant differences between the student and the parent groups (p=0.051). This means that, it is likely that all the respondent groups have similar perception on effective leadership in schools. Table 11 below shows the multiple comparisons among the groups on effective leadership.

Table 11. Respondents views on effective leadership

Dependent Variable: Effective leadership
Tukey HSD

(I) Respondent Category	(J) Respondent Category	Mean Difference (I-J)	Std. Error	Sig.
Headmasters and teachers	Students	3.490***	.556	.000
	Parents	1.995***	.585	.002
Students	Headmasters and teachers	-3.490***	.556	.000
	Parents	-1.495	.635	.051
Parents	Headmasters and teachers	-1.995***	.585	.002
	Students	1.495	.635	.051

P≤ 0.001*** =strongly significant, p≤0.01**= significant, p≤0.05*= almost significant

4.6   Effective school-community/parent partnership

Effective school-community partnership was also measured using an independent
sample T-test. In all, nine 5-Likert items from the survey were computed into a single
variable (school-community partnership) and used as an outcome variable to predict
respondents' views on how the school linked up with the larger community. A scale of
one (1) was used to analyze the reliability of all nine items and their correlations, and
the results indicated a Cronbach alpha of 0.871 (see appendix F). The independent
sample T-test revealed a statistically strong significant difference in the scores for the
students from low performing schools (M=17.12) and high performing schools
(M=25.51) on effective school-community partnership; t (195)=9.211, p = 0.00o (see
appendix G). It was learnt from the result that effective school-community partnership
plays an important role on the performances of the various schools. In other words, the
result suggests that academic standards are raised to certain level when schools involve
the communities in their activities. Table 12 below shows the group statistics between
high and low performing schools on effective school-community partnership.

Table 12. Performance of schools and effective school-community partnership

	Performance of schools	N	Mean	Std. Deviation	Std. Error Mean
Effective school-community partnership	Low	80	17.12	5.303	.490
	High	117	25.51	7.488	.837

P≤ 0.001*** =strongly significant, p≤0.01**= significant, p≤0.05*= almost significant

Additionally, a one-way ANOVA was used to determine whether the respondent groups (headmasters and teachers, students, and parents) have different perception towards effective school-community partnership. There was a statistically strong significant difference between the groups as determined by one-way ANOVA (F=3.403, p=0.035; see appendix G). A Tukey post-hoc test revealed that the headmasters and teachers, and students groups have a statistically almost significant difference (p=0.038) in terms of perception on effective school-community partnership. However, there were no statistically significant differences between the headmasters and teachers, and parents groups (p=0.987) as well as between students and parents groups (p=0.111). Table 13 below explains the multiple comparisons between the groups on effective school-community partnership.

Table 13. Respondents views on effective school-community partnership

Dependent Variable: Effective school-community partnership
Tukey HSD

(I) Respondent Category	(J) Respondent Category	Mean Difference (I-J)	Std. Error	Sig.
Headmasters and teachers	Students	3.076***	1.248	.038
	Parents	.200	1.313	.987
Students	Headmasters and teachers	-3.076***	1.248	.038
	Parents	-2.876	1.425	.111
Parents	Headmasters and teachers	-.200	1.313	.987
	Students	2.876	1.425	.111

P≤ 0.001*** =strongly significant, p≤0.01**= significant, p≤0.05*= almost significant

On another hand, responses of an open-ended question 34 from the parents' questionnaire indicated that majority of the participants constituting 72% perceive regular parent-teacher meetings as a major construct to effective school-community partnership (see appendix E). Almost half (46%) of the respondents are of the view that

routine visit to the schools constitutes immensely in partnering schools and their communities. Other responses such as parental involvement in the decision-making process (24%), organizing community-based programmes (15%), and cooperation between the school and the community (4%) were also considered significant to building effective school-community partnership. Moreover, 40% of respondents from the headmasters and teachers group that answered question 40 of the open-ended question indicated parental involvement as one of the factors, which plays important roles in school effectiveness (see appendix C). Interestingly, few student respondents (7%) suggested the need for support and motivation from parents to improve their academic performance (see appendix D). Altogether, parents have a distinct and passionate view on school-community partnership compared to headmasters, teachers and students. Notwithstanding all the respondent groups perceive strong school-community partnership as an important factor to school effectiveness.

5 DISCUSSION AND CONCLUSION

In this chapter, findings from the study will be discussed in relation to the themes in the theoretical background. The chapter is divided into six main parts, and the first three discusses findings made from the three research questions. The fourth part reviews the study through means of validity and reliability whilst part five summarizes the study. The final part suggests areas for further studies relating to school effectiveness and students' performance.

The aim of this study was to determine appropriate means of raising educational standards in Ghana. Obviously, students test scores cannot be the only yardstick to high educational standards (Ankomah et al., 2005, p. 6). Hence, this study attests to the fact that there are more contributive factors to high educational standards. The following themes were emerged to determine the factors that contribute to high school performance in Ghana. They include classroom instruction and student's learning, teacher's development and working conditions, and effective school-community partnership.

5.1 Classroom instruction and students' learning

To start with, the majority of the respondents agreed that schools in Ghana do not have sufficient teaching-learning materials to teach in the classroom. Ankomah et al. (2005, p. 11) confirm that one issue hindering the attainment of quality education in Ghana is lack of educational facilities. They further state that it is difficult to improve upon the quality of education when there are obsolete laboratories and insufficient inputs to

experiment in schools. Findings from this study also indicate some discrepancies in the distribution of teaching-learning materials to the schools. Whiles some high-performing schools admit having more teaching-learning materials; others seem to complain of not having enough. However, this study admittedly revealed that most of the high-performing schools had adequate teaching-learning materials at their disposal compare to schools with lower performances. A study in UNESCO (2004, p. 228) reveals that the cognitive achievement levels of students are significantly improved through the provision of textbooks and other pedagogical materials. All in all, there is a strong indication from this study that provision of schools with textbooks, and repairing deteriorated school buildings should be the prime concern of educational authorities in order to boost students' achievements (see Glewwe & Jacoby, 1994, p. 843).

In the second place, the third millennium development goal states that all should have equitable access to learning (UNESCO, 2004, p. 28). Murphy, Anzalone, Bosch and Moulton (2002, p. 1) also believe that internet accessibility and quality of educational opportunities must be improved at all levels. Besides, findings from Abadzi (2006, p. 89) indicate that in Ghana, textbooks helped improve student's test score. Consequently, the results for this study disclose that high-performing schools provide their students with all the necessary materials and support within the classroom to ensure high and quality education. In other words,   students' performance can be raised when they are provided with equal opportunity to learn. Alternatively, one of the answers to poor students' performance in Ghana is lack of opportunity to learn (Gillies & Quijada, 2008, p. 2) and the results proved that a substantial number of schools in Ghana to do not provide enough opportunity for students to learn, hence students' performances are low.

Finally, MoESS (2008, p. 85) argues that one key indication of quality and efficiency in schools in Ghana is the teacher-student ratio. The data collected for this study proved a mixed result about teacher-student ratio and academic performance. This was consistent in the Millennium Development Goals [MDG] report (2006, p. 14) that despite the importance of the student-teacher ratio as one of the means in ensuring quality education, there have been mixed results on its impact of students' performance. On the contrary, the finding was inconsistent with the hypothesis that higher student-teacher ratio does not promote students' performance (Diaz et al., 2003, p. 2).The

findings revealed that even the high-performing schools in Ghana face the issue of the high student-teacher ratio. Averagely, the student-teacher ratio in Ghana is 35:1 (MoESS, 2008, p. 85), yet due to the government campaign for all school going children to attend school but without instantaneous increases in available resources, teachers struggle to handle classrooms that have more than 80 students (Ghana National Association of Teacher [GNAT], 2011, p. 4; Global Health Workforce Alliance, 2006, p. 2).

5.2   Teachers' development and working conditions

The results indicated that teacher's professional development and working conditions was lower within schools with lower performance than in high-performing ones. This is because most of the high-performing schools tend to hire the best and well qualified teachers (World Bank, 2010, p. 43). Moreover, participants from the three groups mainly agreed and supported each other on the fact that teacher's development and working conditions are one of the key factors to promoting student's learning. Particularly, headmasters and teachers, and student groups of participants for this study share a significant similar view on how teacher's development and working conditions can boost students' achievement. Hence, the global e-schools and communities initiative [GESCI] workshop (2006, p. 6) stress the need to encourage teacher's professional development programme especially once teachers have obtained their initial training. Accordingly, knowing the essence of teacher's professional development in ensuring school effectiveness, Mereku, Yidana, Hordzi, Tete-Mensah, and Williams (2009, p. 12) advise educators in Ghana to engage in a continuing professional development training to improve their competencies. In short, it requires vigorous staff recruitment and training in order to promote high academic standards in teaching and research (Asabere-Ameyaw, 2011, p. 2).

5.3   Effective leadership

Findings made by Witziers, Bosker and Krüger (2003, p 401) describe effective leadership as a paramount characteristic of an effective school. In other words, a substantial number of educational policy makers agreed upon the fact that principals make an important difference in school effectiveness (Hallinger & Heck, 1998, p. 185). A previous study on leadership also discovered that schools with effective leadership tend to have higher levels of achievement than those with poor and ineffective leaders (Kaplan, Owings & Nunnery, 2005, p. 40). Subsequently, findings from this study proved that schools with higher performance also have good and effective leadership compared to those with lower performance. This study is also consistent with the fact that an increase in school leadership automatically translates into a mean increase in student achievement (Waters, Marzano & McNulty, 2003, p. 3). Furthermore, the results indicate that all the respondent groups (Headmasters and teachers, students, and parents) are relatively similar in terms of how they perceive school leaders. In other words, findings from the results conclude that teachers, students and parents have positive perception with each other when it comes to effective leadership in schools.

5.4   Effective school-community partnership

The findings indicate a significant relationship that exists between the school and the community. Indeed, a strong school-community partnership leads to improved student achievement (Ali, 2011, p. 60). On the other hand, research indicates that schools where teachers do not get the opportunity to communicate with parents, student's performances are poor (Gaonnwe, 2005, p. 47). It is certain about the results that high-performing schools often build stronger ties with their communities compared to low-performing ones. Furthermore, the findings from this study indicate that headmasters and teachers, and students groups are relatively similar to each other with regards to how schools relate to the larger communities. However, students and parents groups do not share the same sentiment. This is partly because students showed less interest when there was a strong and formidable school-community partnership. Experience has taught me that students hardly complain to their parents when there is cordial relationship

between the parents, and the schools since many parents provide judgment of schools base for the comments students make (see also Kindred, 1976, p. 105). This assertion is consistent in the findings from this study.

Lastly, the power of parents' inputs in bridging the gap between the school and the community cannot be over emphasized (Howland, Anderson, Smiley & Abbott, 2006, p. 62). This study indicated strong interest parents have in building an effective school-community partnership. For instance, a previous study shows that parents sturdily belief that the utmost legacy they can offer their children is providing them with education (Donkor, 2010, p. 31). The study also shows that one ideal platform on which parents can be involved in the decisions of the school is through regular PTA meetings. A research finding reveals that schools where routine PTA meetings are held, teachers, parents, and students encounter fewer problems (Gaonnwe, 2005, p. 48). Besides, findings from Donkor (2010, p. 33) confirmed that PTA meetings have brought massive improvements on the relationship between the school and the community.

5.5 Validity and reliability

In this section, validity and reliability will be used to review the study by authenticating the process and findings made from this research.

5.5.1 Validity

A measure is valid if it measures exactly what it meant to measure without incidental inclusion of other factors (Thanasegaran, 2009, p. 37). Kimberlin and Winetrstein (2008, p. 2278) define validity "as the extent to which an instrument measures what it purports to measure". According to Stenbacka (2001, p. 552) in validity, respondents form part of the problems and are provided the opportunity to share their views based on their knowledge structures. Kimberlin and Winetrstein (2008, p. 2278) emphasis, validity is not a property in itself; instead, it is the degree of which the interpretations of the results from a test are justified. Thus, researchers "affect the interplay between construct and data in order to validate their investigation, usually by the application of a test or other process". It determines whether accurate measurements are adopted and whether they are measuring what they are intended to measure (Golafshani, 2003, p.

599). Muijs, (2004, p. 66) concedes that the results of our research design or statistical analyses will be meaningless if we are not truly measuring what we are purporting to measure.

Furthermore, Messick (1995, p. 741) divides the concept of validity into three main facets: content, construct, and criterion validity. First of all, content validity determines whether the items in the questionnaire actually reflect on the theoretical aspects of which it should measure. Accordingly, the measurement of content validity largely depends on the operationalization of variables in the questionnaire (Thanasegaran, 2009, p. 38.) In simple term, content validity denotes whether or not the items in the questionnaire are able to measure exactly what is expected to measure (in this case theme for the study) (Muijs, 2004, p. 66). Subsequently, this study was emerged on four main themes and all the items in the survey were in relation to them. For instance, there were items in the questionnaire such as teacher's innovation and motivation that was used to measure teacher's development and working conditions.

Construct validity, on the other hand, provides judgment on the basis of accumulation of evidence on a couple of studies using a specific measuring instrument (Kimberlin & Winetrstein, 2008, p. 2279). In other words, the operationalization of the construct involves series of attributes that are hypothesized in relation to be latent construct. (Thanasegaran, 2009, p. 38). In short, construct validity in quantitative research is described as one "which included the initial concept, notion, hypothesis which determines which and how the data will be gathered" (Golafshani, 2003, p. 599). In practice, this study hypothesized that there are other contributive factors to student's performance than the usual student's test score. Ironically, my theoretical framework was consistent with this assertion, for instance, Judith and Frederick (1987, p. 10) believe that student's achievement scores should be considered as a subset of a bigger concept of school effectiveness.

Lastly, criterion validity refers to the ability to draw accurate inferences from test scores to a related behavioral criterion of interest (Thanasegaran, 2009, p. 39). In a similar vein, criterion validity measures how new scores obtained correlate with other measures from a similar construct (Kimberlin & Winetrstein, 2008, p. 2279). Further, researchers seek to determine a high degree of correlation between the criterion variable and scores in the testing instrument in order to obtain a viable criterion validity.

Moreover, in criterion validity, researchers show interest in finding the predictive usefulness on their instrument (Thanasegaran, 2009, p. 39.) In other words, researchers would like to determine whether or not their instrument predicts the outcomes that are theoretically expected to occur (Muijs, 2004, p. 67). Accordingly, in this study, a sample T-test was emerged to determine whether or not high achievement schools consider other school effectiveness enhancing factors such as effective leadership, effective school-community partnership and many more as the way forward to raising students' academic performance.

5.5.2 Reliability

Golafshani (2003, p. 601) emphatically acknowledges that the best way to measure quantitative research is through the concept of reliability. Reliability, therefore, is the extent to which errors are avoided in the measurement procedure and therefore, yield consistent results (Thanasegaran, 2009, p. 35). Cohen et al. (2000, p. 117) also believe that reliability concerns with precision and consistent. Thanasegaran, (2009, p. 35) however, emphasis the function of determining a reliability test is not stagnant, rather, it estimates change with different population samples and "as a function of the error involved". In other words, reliability must demonstrate that when a test is carried out on a similar group in a similar contest, the results will be the same (Cohen et al., 2000, p. 117).

Researchers adhere to the notion that reliability estimates are used to measure the internal consistency of items on the questionnaire and the stability of individual's scores that are relatively the same via the test-retest method at different times (Golafshani, 2003 pp. 598-599; Thanasegaran, 2009, p. 36; Kimberlin & Winetrstein, 2008, p. 2277). On one hand, stability reliability is measured by administering a test to the same individuals at two different times and determining the correlation associated with the tow set of scores (Thanasegaran, 2009, p. 36; Kimberlin & Winetrstein, 2008, p. 2277). On the other hand, internal consistency requires that the testing instrument to be run once only through the split-half method (Cohen, Manion and Morrison, 2000, p. 118). In that situation, internal consistent reliability measures or estimates the equivalence of set of an item from the test (Kimberlin & Winetrstein, 2008, p. 2277). Moreover, internal reliability is appropriate to only instruments with more than one item and must

indicate how well these items are measured in a single construct (Muijs, 2004, p. 73). In tackling the reliability issues in research, pundits in the field of research explain reliability internal consistency as what may be measured using Cronbach's alpha (Thanasegaran, 2009, p. 36; Kimberlin & Winetrstein, 2008, p. 2277; Muijs, 2004, p. 73). A Cronbach's alpha was used to determine the reliability of selected items for each of the themes in this study, as depicted in appendix F.

5.6 Summary of the thesis

The purpose of the study was to determine appropriate means of raising educational standards in senior high schools in Ghana. The following themes were considered in order to answer the research question. They were: classroom instructions and student learning, teacher's development and working conditions, effective leadership, and effective school-community partnership.

A descriptive analysis on the data revealed that availability and fair distribution of teaching learning is very essential in raising student's performance. It was also revealed that provision of text and repairing of infrastructures such as school building will foster teaching and learning (Glewwe & Jacoby, 1994, p. 843). The study discovered that student's performance increases when they are provided with equal opportunity to learn. However, findings from the data indicated that most schools in Ghana do not create the opportunity and the atmosphere for student' learning and this account for low students' performance. It was revealed from the results that student-teacher ratio has no effect on school achievement, though the study also showed the need for increase in teacher recruitment when student enrolment increases.

Furthermore, an independent sample T-test indicated that teacher's development and working conditions is vital to student's academic performance. The results suggest schools that show keen interest in developing their teachers tend to perform better than those who do otherwise and therefore, encourage schools to organize regular training and refresher programmes for their teachers. Besides, the ANOVA statistics approach revealed that headmasters, teachers, and students shared a relatively similar view of the need to develop and improve teachers working conditions as a way to improving academic standards in schools in Ghana.

Once more, an independent sample T-test showed that effective leadership contributes significantly to high academic standards. It was discovered an increase in school leadership automatically translate into the mean increase in student achievement (Waters, Marzano, McNulty, 2003, p. 3). Hence, the study revealed that schools with effective leaders perform better than those with ineffective leaders. The one way ANOVA also revealed that all the three groups of respondents are relatively similar in terms of their perceptions on an effective school leader. This is largely so because, school leaders are perceived as agents of change (Sakulsumpaopol, 2010, p. 4) and that their role in promoting high student performance in greatly recognized by all educational stakeholders.

Lastly, an independent sample T-test revealed that effective school-community partnership plays a significant contribution to raising the academic standards of education in Ghana. It was evident in the findings that schools with stronger connection with the community perform well. In other words, the study suggested that the more support that children receive from the parents in their learning and educational progress, the more they tend to perform in school and continue their education (Henderson & Mapp, 2002, p. 30). However, it was discovered that majority of the schools in Ghana have created a huge gap between the schools and the community (Howland et al., 2006, p. 62). To bridge this gap between the school and the community, this study suggested that regular PTA meetings be held at least three times in one academic terms. Moreover, the ANOVA report revealed headmasters, teachers and students had similar perception towards building effective school-community partnership as another means to raise the academic standards in Ghana. Conversely, the study suggested that educational authorities should pay attention to community's attitudes toward school involvement.

5.7 Suggestions

The issue of educational standards and school effectiveness are broader than one can imagine and the search for which is the best model to be adopted to achieve high standards will forever be in the heart of researchers. Therefore, it will be appropriate if further research could be conducted to find the optimum model that be used in schools to achieve high educational standards in Ghana.

Furthermore, education is the key to development of every nation and so educating its children is vital and must do in order since they are the future leaders. From the study conducted, I realized that many of the researches made mentioned lack of professional teachers, teaching-learning materials and inadequate classrooms, etc. as some of the main deterrents to achieving educational standards. I therefore, recommend that government of Ghana invest more in education to achieve the high educational standards that everybody is desperate for.

Finally, this study was conducted using a quantitative approach. Besides, it was noticed during the study that studies have also been conducted using the qualitative approach. I suggest that future study could be conducted using a mixed approach in order to provide diverse ways of raising educational standards in Ghana.

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APPENDICES

Appendix A: Questionnaires for the survey

Headmaster/assistant and teacher's questionnaire

Group A

This questionnaire is part of my research study to find out about school effectiveness. Kindly contribute your quota by filling these questions below. Thank you for completing this form.

Respondents are assured of the confidentiality of the document.

Name of the school: ……………………………………………………………………

City: ……………………………………………………………………………………..

Please tick (√) where appropriate

1. How many years have you served as a headmaster/assistant or teacher in this school?

    ☐ Less than 3 years   ☐ 3-5 years   ☐ 6-10 years   ☐ More than 10 years   ☐ Others

2. Indicate your age range

    ☐ 30 years or younger   ☐ 31-40 years   ☐ 41-45 years   ☐ 46-55 years   ☐ 56 years or older

3. What is your gender?

    ☐ Male   ☐ Female

4. Which best describe your educational background?

    ☐ Some college   ☐ Bachelor's degree   ☐ Master's degree   ☐ Doctorate degree   ☐ Others

5. How many teaching staff members are in the school?

   ☐ Less than 50   ☐ 50-74   ☐ 75-99   ☐ 100 or above

6. What is the total number of students in your school?

   ☐ Less than 500   ☐ 501-700 students   ☐ 701-900 students   ☐ 901-1200 students   ☐ 1201 or above

7. How many periods are there per school day?

   ☐ 6 periods   ☐ 7 periods   ☐ 8 periods   ☐ 9 periods   ☐ 10 periods

How strongly do you agree with the following claims (1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree)

Please circle (o) were appropriate

8. Teachers are encouraged to be innovative.	1 2 3 4 5
9. There are sufficient supply and availability of teaching and learning materials in the school.	1 2 3 4 5
10. The school is very open to curriculum changes.	1 2 3 4 5
11. Academic standards are considered in the planning and development of curriculum.	1 2 3 4 5
12. Teachers are competent in methods and in the use of ICT.	1 2 3 4 5
13. Students actively participate in planning, evaluating and taking responsibilities in the learning process.	1 2 3 4 5
14. The school is performing well in the West African Secondary School Certificate Examination.	1 2 3 4 5
15. Special teaching services are available to students with special needs (low academic achievers)	1 2 3 4 5
16. Classroom instruction focuses on the desired students outcomes	1 2 3 4 5
17. Teachers discuss their lessons and teaching strategies with each other.	1 2 3 4 5
18. The headmaster often has personal interaction with teachers.	1 2 3 4 5
19. Goals and aspirations of the school are discussed with teachers, students and parents.	1 2 3 4 5
20. Teachers often discuss students' performances and behaviors with parents.	1 2 3 4 5
21. Students respect and behave well towards their teachers.	1 2 3 4 5
22. The school organizes community based programmes.	1 2 3 4 5
23. The headmaster treats all students, staff and parents with respect	1 2 3 4 5
24. Students have textbooks/internet access to learn at home.	1 2 3 4 5
25. Parents are involved in making decisions on students' learning.	1 2 3 4 5
26. Regular parent-teachers association meetings are held towards the development of the school.	1 2 3 4 5
27. Teachers and students are assigned leadership responsibilities in the day to day affairs of the school.	1 2 3 4 5
28. Teachers' professional skills are well developed.	1 2 3 4 5
29. The headmaster has trust in his or her teachers.	1 2 3 4 5
30. Issues are well discussed with teachers before decisions are made.	1 2 3 4 5
31. Open and fair administration is operated in the school.	1 2 3 4 5

32. Teachers and students are well motivated towards academic
    achievement.   1 2 3 4 5
33. Students participate more in extra-curricular activities.   1 2 3 4 5
34. The school Principal communicates effectively with community 1 2 3 4 5
35. Parents are welcome to visit the school anytime.   1 2 3 4 5
36. Parents take good responsibilities in students' educational
    needs.   1 2 3 4 5
37. Career guidance officer help students in selecting their courses. 1 2 3 4 5
38. Parents encourage students in their personal studies.   1 2 3 4 5
39. How does effective leadership affect the academic performance of your school?
    ....
    ....
    ....
    ....
40. Briefly discuss the factors which play an important role in school effectiveness.
    ....
    ....
    ....
    ....

Student's questionnaire

Group B

This questionnaire is part of my research study to find out about school effectiveness. Kindly contribute your quota by filling these questions below. Thank you for completing this form.

Respondents are assured of the confidentiality of the document.

Name of the school: ………………………………………………………………….
City: ………………………………………………………………………………….

Please tick (√) were appropriate

1. Indicate your class

    ☐ SHS 1   ☐ SHS 2   ☐ SHS 3   ☐ SHS 4

2. Indicate your age range

    ☐ 14 years or   ☐ 15   ☐ 16   ☐ 17 years   ☐ 18
       younger   years   years   years or
                                                                 older

3. What is your gender?

    ☐ Male   ☐ Female

4. Which best describe your parents' educational background?

    ☐ Some   ☐ Bachelor's   ☐ Master's   ☐ Doctorate   ☐ Others
       college   degree   degree   degree

How strongly do you agree with the following claims (1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree)

Please circle (o) were appropriate

41. Teachers are encouraged to be innovative.   1 2 3 4 5
42. There are sufficient supply and availability of teaching and
    learning materials in the school.   1 2 3 4 5
43. The school is very open to curriculum changes.   1 2 3 4 5
44. Academic standards are considered in the planning and
    development of curriculum.   1 2 3 4 5
45. Teachers are competent in methods and in the use of ICT.   1 2 3 4 5
46. Students actively participate in planning, evaluating and taking
    responsibilities in the learning process.   1 2 3 4 5
47. The school is performing well in the West African Secondary
    School Certificate Examination.   1 2 3 4 5
48. Special teaching services are available to students with special
    needs (low academic achievers)   1 2 3 4 5
49. Goals and aspirations of the school are discussed with teachers,
    students and parents.   1 2 3 4 5
50. Teachers often discuss students' performances and behaviors
    with parents.   1 2 3 4 5
51. Students respect and behave well towards their teachers.   1 2 3 4 5
52. The school organizes community based programmes.   1 2 3 4 5
53. The headmaster treats all students, staff and parents with
    respect.   1 2 3 4 5
54. Parents are involved in making decisions on students' learning. 1 2 3 4 5
55. Regular parent-teachers association meetings are held towards
    the development of the school.   1 2 3 4 5
56. Teachers and students are assigned leadership responsibilities
    in the day to day affairs of the school.   1 2 3 4 5
57. Teachers' professional skills are well developed.   1 2 3 4 5
58. Open and fair administration is operated in the school.   1 2 3 4 5
59. Teachers and students are well motivated towards academic
    achievement.   1 2 3 4 5
60. Students participate in more extra-curricular activities.   1 2 3 4 5
61. The headmaster communicates effectively with the community. 1 2 3 4 5
62. Parents are welcome to visit the school anytime.   1 2 3 4 5
63. Parents take good responsibilities in students' educational
    needs.   1 2 3 4 5
64. Career guidance officer help students in selecting their courses. 1 2 3 4 5
65. Students have textbooks/internet access to learn at home.   1 2 3 4 5
66. Classroom instruction focuses on the desired students outcomes 1 2 3 4 5
67. Parents encourage students in their personal studies.   1 2 3 4 5
68. What changes would you like to see in your school in order to raise its standards?
    ....
    ....
    ....
    ....

69. What do you think can be done to improve your academic performance?

....
....
....
....

Parent's questionnaire

Group C

This questionnaire is part of my research study to find out about school effectiveness. Kindly contribute your quota by filling these questions below. Thank you for completing this form.

Respondents are assured of the confidentiality of the document.

Name of your child's school: …………………………………………………………...

City: ……………………………………………………………………………………….

Please tick (√) where appropriate

1. Indicate your child's class

   ☐ SHS 1   ☐ SHS 2   ☐ SHS 3   ☐ SHS 4

2. Indicate your age range

   ☐ 30 years or younger   ☐ 31- 40 years   ☐ 41-45 years   ☐ 46-55 years   ☐ 56 years or older

3. What is your gender?

   ☐ Male   ☐ Female

4. Which best describe your educational background?

   ☐ Some college   ☐ Bachelor's degree   ☐ Master's degree   ☐ Doctorate degree   ☐ Others

5. How will you describe your financial status?

   ☐ High income   ☐ Middle income   ☐ Low income   ☐ Don't know   ☐ Others

6. What is your marital status?

   ☐ Single   ☐ Married   ☐ Divorce   ☐ Widow/er   ☐ Others

How strongly do you agree with the following claims (1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree)

Please circle (o) where appropriate

7. Teachers are encouraged to be innovative.   1 2 3 4 5
8. There are sufficient supply and availability of teaching and learning materials in the school.   1 2 3 4 5

9. The school is very open to curriculum changes. 1 2 3 4 5
10. Academic standards are considered in the planning and development of curriculum. 1 2 3 4 5
11. Teachers are competent in methods and in the use of ICT. 1 2 3 4 5
12. Students actively participate in planning, evaluating and taking responsibilities in the learning process. 1 2 3 4 5
13. The school is performing well in the West African Secondary School Certificate Examination. 1 2 3 4 5
14. Special teaching services are available to students with special needs (low academic achievers) 1 2 3 4 5
15. Goals and aspirations of the school are discussed with teachers, students and parents. 1 2 3 4 5
16. Teachers often discuss students' performances and behaviors with parents. 1 2 3 4 5
17. Students respect and behave well towards their teachers. 1 2 3 4 5
18. The school organizes community based programmes. 1 2 3 4 5
19. The headmaster treats all students, staff and parents with respect. 1 2 3 4 5
20. Parents are involved in making decisions on students' learning. 1 2 3 4 5
21. Regular parent-teachers association meetings are held towards the development of the school. 1 2 3 4 5
22. Teachers and students are assigned leadership responsibilities in the day to day affairs of the school. 1 2 3 4 5
23. Teachers' professional skills are well developed. 1 2 3 4 5
24. Open and fair administration is operated in the school. 1 2 3 4 5
25. Teachers and students are well motivated towards academic achievement. 1 2 3 4 5
26. Students participate more in extra-curricular activities. 1 2 3 4 5
27. The headmaster communicates effectively with the community. 1 2 3 4 5
28. Parents are welcome to visit the school anytime. 1 2 3 4 5
29. Parents take good responsibilities in students' educational needs. 1 2 3 4 5
30. Career guidance officer help students in selecting their courses. 1 2 3 4 5
31. Students have textbooks/internet access to learn at home. 1 2 3 4 5
32. Classroom instruction focuses on the desired students outcomes. 1 2 3 4 5
33. Parents encourage students in their personal studies. 1 2 3 4 5
34. How can the school increase the participation of parents in the school events as well as its curriculum implementation?

....
....
....
....

35. What support would you give in order to improve your child's as well as the school's performance?

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Appendix B: Classification of open ended question responses.

Groups	Question	Classifications from responses	Question	Classifications from responses
A Headmaster and teacher	39	High team spirit High level of discipline Teacher effectiveness Motivational factor Good learning atmosphere Cooperation among members Students' enhanced performance	40	Effective leadership Hard work and commitment Motivation Discipline Provision of teaching leaning materials Good infrastructure Parental involvement Provision of students' academic needs Regular monitoring and supervision.
B Student	32	Qualified teachers Effective teaching method Good infrastructures Motivation Enforcing discipline	33	Regular school attendance Developing personal study plan Provision of learning materials Effective teaching method Remedial classes Support and motivation from parents Respect for teachers Involving in school activities Regular assessment Cooperation (students and teachers)
C Parent	34	Involvement in the decision making process Regular Parent-Teacher meetings Organizing community based programmes Regular visit to the school Cooperation between the school and the community	35	Provision of support and motivation for students Provision of teaching learning materials Guidance and counseling Monitoring progress of students

Appendix C: Multiple response set of open ended questions from headmaster/teacher questionnaire.

Question 39: How does effective leadership affect the academic performance of your school?

Classified items	Responses		Percent of Cases
	N	Percent	
High team spirit	13	9.6	19.1
Instill discipline	18	13.3	26.5
Teacher effectiveness	5	3.7	7.4
Motivation	15	11.1	22.1
Good learning atmosphere	26	19.3	38.2
Cooperation	13	9.6	19.1
High academic performance	45	33.3	66.2
Total	135	100.0	198.5

a. Dichotomy group tabulated at value 1.

Question 40: Briefly discuss factors which play important roles in school effectiveness.

Classified items	Responses		Percent of Cases
	N	Percent	
Effective leadership	44	21.2	57.9
Commitment and hard work to work and studies	21	10.1	27.6
Motivation	33	15.9	43.4
Discipline	23	11.1	30.3
Provision of teaching learning materials	34	16.3	44.7
Good infrastructure	5	2.4	6.6
Parental involvement	30	14.4	39.5
Provision of students' academic needs	4	1.9	5.3
Regular monitoring and supervision	14	6.7	18.4
Total	208	100.0	273.7

a. Dichotomy group tabulated at value 1.

Appendix D: Multiple response set of open ended questions from student questionnaire.

Question32: What changes would you like to see in your school in order to raise its standards?

Classified items	Responses N	Percent of Cases Percent	
Qualified teachers	12	14.1	20.7
Effective teaching method	5	5.9	8.6
Good infrastructure	50	58.8	86.2
Motivation	7	8.2	12.1
Enforcing discipline	11	12.9	19.0
Total	85	100.0	146.6

a. Dichotomy group tabulated at value 1.

Question 33: What do you think can be done to improve your academic performance?

Classified items	Responses N	Percent	Percent of Cases
Regular school attendance	6	6.2	10.3
Developing personal study plan	20	20.8	34.5
Provision of learning materials	30	31.2	51.7
Effective teaching method	11	11.5	19.0
Remedial classes	3	3.1	5.2
Support and motivation from parents	4	4.20	6.9
Respect for teachers	8	8.3	13.8
Involving in school activities	3	3.1	5.2
Regular assessment	4	4.2	6.9
Cooperation (students and teachers)	7	7.3	12.1
Total	96	100.0	165.5

a. Dichotomy group tabulated at value 1.

Appendix E: Multiple response set of open ended questions from parent questionnaire.

Question 34: How can the school increase the participation of parents in the school events as well as its curriculum implementation?

Classified items	Responses(N)	Percent	Percentage of cases
Involvement in the decision making process	11	14.9	23.9
Regular Parent-Teacher meetings	33	44.6	71.7
Organizing community based programmes	7	9.5	15.2
Regular visit to the school	21	28.4	45.7
Cooperation between the school and the community	2	2.7	4.3
Total	74	100.0	160.9

a. Dichotomy group tabulated at value 1.

Question 35: What support would you give in order to improve your child's as well as the school's performance?

Classified items	Responses (N)	Percent	Percentage of cases
Provision of support and motivation for students	25	33.3	55.6
Provision of teaching learning materials	30	40.0	66.7
Guidance and counselling	8	10.7	17.8
Monitoring progress of students	12	16.0	26.7
Total	75	100.0	166.7

a. Dichotomy group tabulated at value 1.

Appendix F: reliability analyses of Cronbach's Alpha

Reliability statistics on items selected for equal opportunity to learn

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.842	.843	8

Reliability statistics on items selected for Teacher development and working conditions

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.858	.857	7

Reliability Statistics on items selected for effective leadership

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.864	.864	4

Reliability Statistics on effective school-community partnership

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.869	.871	9

Appendix G: statistical results from the data

Independent Samples Test on provision of opportunity to learn

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Equal opportunity to learn	Equal variances assumed	.532	.517	10.003	195	.000
	Equal variances not assumed			9.950	166.693	.000

ANOVA

Student-teacher ratio

		Sum of Squares	df	Mean Square	F	Sig.
Student-teacher ratio	Between Groups	1.381	1	1.381	8.600	.004
	Within Groups	13.811	86	.161		
	Total	15.192	87			
Total number of teaching staff	Between Groups	9.094	1	9.094	17.088	.000
	Within Groups	45.769	86	.532		
	Total	54.864	87			
Total number of students	Between Groups	3.469	1	3.469	18.062	.000
	Within Groups	16.519	86	.192		
	Total	19.989	87			

Independent Samples Test on teacher's development and working conditions

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Teacher development	Equal variances assumed	20.166	.865	10.159	195	.000
	Equal variances not assumed			9.482	128.423	.000

ANOVA

Teacher's development and working conditions

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	397.054	2	198.527	7.039	.001
Within Groups	5471.413	194	28.203		
Total	5868.467	196			

Independent Samples Test on effective leadership

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Effective leadership	Equal variances assumed	67.319	.745	7.124	195	.000
	Equal variances not assumed			6.364	106.613	.000

ANOVA

Effective leadership

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	443.478	2	221.739	20.322	.000
Within Groups	2116.827	194	10.911		
Total	2560.305	196			

Independent samples test on effective school-community partnership

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Effective school-community partnership	Equal variances assumed	15.630	.862	9.211	195	.000
	Equal variances not assumed			8.650	131.908	.000

ANOVA

Effective school-community partnership

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	374.190	2	187.095	3.403	.035
Within Groups	10664.907	194	54.974		

Total	11039.096	196