UNIVERSITY OF CAPE COAST

STAKEHOLDERS' PERCEPTION OF THE COMPUTERIZED SCHOOL SELECTION AND PLACEMENT SYSTEM: A STUDY OF THE GREATER ACCRA REGION, GHANA

BY

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

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Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

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ABSTRACT

The study was intended to find out whether the Computerized School Selection and Placement System (CSSPS) was a better alternative to the manual system in the process of selection of qualified students in the Senior High Schools (SHSs) in the Greater Accra Region of Ghana. A sample size of 306 was selected from a population of 994.Stratified and simple random sampling procedures were employed to select the subjects in the study sample. Respondents to the questionnaire and interview were randomly selected. A pilot study was conducted in the Eastern Region to test the validity and reliably of the instrument. The Cronbach alpha coefficient reliability at 0.7 was recorded. The data generated was processed and converted into percentages to facilitate the analysis and discussion processes. The results indicated that the introduction of the CSSPS did not significantly increase enrolment in the least endowed schools; neither did it minimize the preference for endowed schools.

However, the CSSPS significantly minimized the human errors that characterized the manual system and accelerated the rate of selection and placement process. The major challenge to the CSSPS was the human factor in terms of refusal of parents and students to accept placement into other schools apart from their chosen endowed schools. It is recommended that the CSSPS should be used in combination with other placement systems such as the Random Placement Systems to achieve a mixed talent distribution of students across the schools in the study area.

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DEDICATION

To my mum who has supported me through thick and thin to make this thesis possible.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER ONE

INTRODUCTION

Background to the Study

In 1987, the Government of Ghana adopted a new educational system comprising six years of primary school, three years Junior Secondary School (JSS), three years Senior Secondary School (SSS) and four years University Education. This 6-3-3-4 structure of education was part of a reform initiated to address deficiencies in the Public Education System. The long-term objective of the reform was to achieve Universal Basic Education and also to expand and increase access to secondary and tertiary education [Computerized School Selection and Placement System (CSSPS) Report, (2006)].

To achieve the stated objective, the education system was given a new approach with emphasis on quality and diversification of content. A major feature under the reform was the introduction of the Basic Education Certificate Examination (BECE) which is written at the end of the 9-year basic school. The BECE was introduced to replace the Common Entrance Examination which was conducted to select candidates. The BECE results have since constituted the basis and criteria for selection and placement of students into second cycle institutions as well as certification of Senior Secondary School, and Junior High School (JHS), graduates.

The parameters for admission and placement have been to use aggregate 6 – 30 as the cut-off point for a candidate to qualify for placement. Prior to 2005, selection and placement into the Senior High Schools was done manually through hand picking of cards. Parents were expected to buy entry forms in advance before their wards were allowed to take the entry examination, that is, the BECE organized by the West African Examinations Council (WAEC). After the examination, the test scores which were aggregate scores, together with the entry cards were sent to a central location, where the selection of qualified candidates took place manually. The central location was most often a big school, with enough facilities to accommodate the selection officials, comprising heads of Senior High Schools and their assistants as well as personnel from the Regional Education Offices. The official manual selection process spanned three days. The entry cards together with the examination scores were grouped according to the existing schools. All the entry cards of candidates who chose a particular school as their first choice were given to the Head of that school. That is, if one thousand candidates chose Achimota School as their first choice, the thousand cards were officially given to the Head. The headmasters or headmistresses and their assistants subsequently scanned through the cards manually to select candidates whose examination scores satisfied the individual standards set by the various schools according to their existing vacancies. After that the remaining cards were sent to the second choice schools of the candidates. Where the examination scores or aggregate of a candidate did not meet the requirements of the second choice

school, the cards were returned to a particular place normally referred to as the "pool".

Heads of schools, who could not get their required number of candidates from their first, second and third choices, scan through the 'pool' to make up for the vacant positions. After the three days of selection some heads of less popular schools later go back to regional offices where the remaining regional-based cards are kept to look for cards to finally fill the vacant places left by candidates, who were not able to respond to the placement positions offered them.

This manual system of selection and placement was very laborious and for many years constituted a source of worry, stress and frustration to parents, heads of second cycle institutions, candidates and many stakeholders in the educational enterprise. Issues of missing cards, wrong choices of programmes, rejection of second and third – choice candidates by heads of institutions, the inability of candidates to select schools from more than one region were some of the problems that were associated with the manual system. The result of all these is that many candidates did not gain admission to Secondary Schools. The Ministry of Education Report (2003) noted that since 1990 the number of qualified candidates has always been far in excess of available spaces to accommodate them in the various designated institutions. The report also showed that, between 1990 and 2000 and ever since about 250, 000 students sat for the BECE each year. Out of this number, about 150,000 (64.2%) candidates qualify for placement in second cycle institutions. However, only 64,000 – 70,000 (42 – 46.6%) graduates eventually got admitted into the various schools. The situation

became exacerbated, when it was noted that after the year 2005, over 300,000 candidates wrote the BECE annually. From the year 2006, the number kept increasing progressively annually above 300,000 students as shown in Table 1. Out of these numbers approximately 60% qualify for placement but only 30% finally got admission into the existing schools through the manual selection process.

Table 1: BECE Results 1998 - 2009

Year	No. of candidates	No. of passes	% Pass rate
2009	395,599	246,872	62.40
2008	338,290	210,282	62.16
2007	320,247	196,240	61.28
2006	308,383	190,924	61.91
2005	287,297	176,959	61.59
2004	278,391	170,324	61.18
2003	268,284	163,613	60.99
2002	264,979	160,262	60.48
2001	247,663	149,600	60.40
2000	233,785	141,535	60.54
1999	233,740	140,729	60.21
1998	229,432	138,477	60.36

Source: Ajayi (2009)

Furthermore, there were issues of imbalances in the enrolment and quality of students admitted. The report noted that whereas a few well endowed schools were over enrolled, the community-based schools were unable to attract students. According to the Education Review Report (2002), over seventy five (75) Senior Secondary Schools had enrolment less than hundred (100) students as at 2002 and the well endowed schools succeeded in admitting only the cream of candidates thereby widening the gap between them and the least endowed schools.

The myriad of problems that besetted the manual system of placement compelled the Ministry of Education and the Ghana Education Service to decide in 2003, to computerize the selection and placement of candidates into Senior Secondary Schools and Technical / Vocational Institutions, hence the introduction of the Computerized School Selection and Placement System (CSSPS) in September, 2005. The process begins with BECE candidates completing specially designed selection cards and scannable forms for processing by computer software developed for that purpose.

The initial qualification for selecting a candidate is candidate's BECE performance in six subjects. These comprise four core subjects - English Language, Mathematics, Science and Social Studies - and two elective subjects. To qualify for placement, a candidate's grade in any of the six (6) subjects should not exceed five (5). This translates into a minimum aggregate of thirty (30) for the six subjects.

Candidates are at liberty to choose four schools from any number of regions that they wish; but the four choices must be listed in order of preference, with the correct code of each school indicated as directed on the Registration or Scannable (Entry) Forms. It is expected that this arrangement will make schools located in rural settings of the country to get students, especially in their operational zones.

Candidates are advised to make sure that their preferred programmes are offered in the schools of their choice. The correct code for each programme must be correctly quoted. Each school selected must go with a specific programme (CSSPS Report, 2005). One unique feature about the CSSPS is that candidates are free to select the same school four times, but with different programmes selected in each case. However, if preference is on a specific programme then different schools offering the programme must be selected (CSSPS 2005). In the event of a tie between candidates at the cut-off point during the selection and placement process, the computer considers key subjects for the programme chosen and selects the candidate with the highest score in that programme category.

Systems of placement are not always 100% perfect and may be characterized with few short falls. The direct beneficiaries of the system are therefore made aware of their responsibilities. The objectives of the identification of the responsibilities are to minimize the impact of the imperfections of the system when BECE results and placement lists are released. The students are schooled explicitly on the requirements of the CSSPS placement procedures. They are made aware that, admission to schools and programmes are very

competitive, hence, placement in the preferred school and programme depends on the student's own hard work. Students are therefore advised to assess themselves very well in terms of their academic capabilities before making their choice of schools and programmes. Students are advised to choose schools that they are certain to secure placement in.

Similarly, parents are informed that, placement of their wards in the chosen school and programme is purely a function of the child's performance at the BECE and the available vacancies and choice of programme. Parents cannot change their minds once the choices and placements have been made. In the event of non-placement after the first run the ward may be placed in a school with vacancy.

The JSS school authorities are required to keep accurate and reliable records of performance of the students to assist in the determination of choice of schools and programmes. To this end, selected teachers are to be trained as Guidance and Counseling Officers. They should be solely responsible for the compilation and analysis of the cumulative records of the students from JSS 1 to 3. Junior Secondary Schools now Junior High Schools, classroom and subject teachers are tasked to thoroughly cover the syllabus and assess the students regularly.

Statement of the Problem

Prior to the inception of the Computerized School Selection and Placement System (CSSPS), the selection and placement of students in second

cycle institutions was mechanical and manual. The manual system was laborious and time-consuming. It was also characterized by several imperfections and flaws such as misplacement of student registration cards/forms, wrong shading of index and code numbers by students and heads of Junior High Schools (JHSs), undue delay in admissions as well as loss of admission letters. Furthermore, the manual system was highly susceptible to human manipulation and machinations such as bribery and corruption. Rich and influential parents used their financial influence to secure placement for their wards in good and well endowed schools to the detriment of good students from poor homes. Similarly, the influence and pressure from "old boys" and "old girls" associations, PTA officials, protocol admissions and greed by some heads of second cycle institutions plagued the admission procedures of the manual system.

Additionally, before the introduction of the CSSPS innovation, heads of very good and endowed schools arbitrarily and unilaterally set high personal cut-off grade points and admission standards to attract only the exceptionally good/gifted students to the detriment of the less brilliant and rural setting students. Furthermore, in the era of the manual system, the period of the release of the BECE results was a terrible period for parents and students. Anxious parents had to travel to the selected schools of their wards to ascertain the admission status of their wards and to pay the admission fee promptly to secure the place else it will be given to another person.

Undoubtedly, these problems that saddled the manual system made it unsuitable as a selection and placement tool. But the question that is often asked

is whether the CSSPS has succeeded in surmounting the inadequacies that were inherent in the manual system. The present study, therefore seeks to find out whether in the opinion of the stakeholders in education the CSSPS is a better alternative to the manual system.

Purpose of the Study

The purpose of the study was to find out whether the CSSPS provides a better alternative to the manual system of selecting and placing of qualified Basic Education Certificate Examination (B.E.C.E) candidates into Senior High Schools.

Research Questions

Five research questions were formulated to guide the study:

1a What has been the effect of the Computerized School Selection and Placement System (CSSPS) on enrolment in the least endowed schools?

b What factors are likely to increase the enrolment of rural schools?

2. To what extent has the institution of the CSSPS provided quick placement of students in Senior High Schools?
3. What are the perceptions of major stakeholders on the CSSPS?
4. How far has the CSSPS minimized the imbalances in the choice of endowed schools?
5. To what extent has the CSSPS minimized the human errors that characterized the manual system?

Research Hypotheses

In addition to the research questions, two hypotheses were formulated to test the significance of the outcomes with reference to research questions one (1a) and four (4). The chi-square was used to test for the significance.

Hypothesis for Research Question 1a

Ho: There has been a significant increase in the enrolment of the Least Endowed Schools (LES) with the introduction of the CSSPS.

Hi: There has been no significant increase in the enrolment of the LES after the introduction of the CSSPS.

Hypothesis for Research Question 4

Ho: The inception of the CSSPS has not changed the pattern of choice of endowed schools.

Hi: The inception of the CSSPS has minimized the imbalance in the choice of endowed schools.

Significance of the Study

Human society resists change because it fears the unknown and the unpredictability associated with not knowing what the change will bring. Frequent resistance to change is manifested in the ideas and perceptions that stakeholders express and have about the intended change. The study synthesized the perceptions and conceptions that the stakeholders expressed about the CSSPS.

Ideas that were not initially envisaged and captured in the development of the software and the solutions to the human inadequacies associated with the manual system had been addressed. These syntheses added to what prevails, will improve the functioning of the system and help to eliminate the resistances to the perfect operation of the system. The work being a maiden work might serve as a rich source of information and as source of reference to subsequent projects. The findings will provide an insight into the workings of the CSSPS both to the stakeholders and its operators so as to improve it's functioning when it is warranted.

Delimitations of the Study

The application of the CSSPS covers all the ten regions of Ghana. It is also being applied to all Public Schools and selected Private Schools in Ghana. However, the study was limited to only the Public Senior High Schools in the Greater Accra Region of Ghana that are listed on the West African Examination Council's (WAEC) Register. The study also explored only the perceptions of stakeholders in the region.

Limitations of the Study

The study aimed at analyzing the perception of stakeholders with reference to the use of the CSSPS for selection and placement of candidates into Senior High Schools in the Greater Accra Region. One limitation was the inability to cover a larger number of second cycle institutions in Ghana. Another limitation

was the subjectivity with which the heads of SHSs interpret the criteria of endowment in the classification of their schools. Again, due to the short time the CSSPS has been in operation, the findings could not unearth all the inhibitions that are inherent and associated in the working of the system.

Definition of Terms

1. Selection: - This is the process whereby Heads of Senior High Schools scan through entry cards of candidates who selected their schools to pick the qualified students.
2. Placement: - It involves offering an admission place for qualified Basic Education Certificate Examination (B.E.C.E) candidates into Senior High Schools in Ghana.
3. Stakeholders: - Stakeholders in this study are persons, groups and institutions who have common interest and are most affected by consequences of the CSSPS. They include:
    a. Students
    a. Parents
    b. Heads of Second Cycle Institutions
    c. Personnel of the Ghana Education Service
    d. The Ministry of Education

Organization of the Study

The thesis is organized into five chapters. Chapter one consists of the introduction to the study. It provides a background to the study and states the problem and the purpose of the study. The other aspects of chapter one is; the research questions, the significance of the study, delimitations, limitations and definition of terms.

Chapter two focuses on the related literature of the study. Both the theoretical and empirical literature is reviewed. The third chapter gives a detailed overview of the research methodology. It describes the research design, the population of the study, the sample and sampling procedure as well as data collection and analysis procedure.

Chapter four dwells on the presentation of data collected, analysis and discussion of findings. Chapter five as the concluding chapter gives a summary of findings, draws conclusions and makes recommendations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter first reviews the theoretical literature related to the study. The theoretical review deals with.

1. Measurement and Evaluation as Selection and Placement Tools
2. The Concepts of Selection and Placement
3. Selection and Placement Mechanisms
4. School Selection and Placement Systems in Selected Countries.
5. School Selection and Placement Systems in Ghana prior to the CSSPS.
6. The Computer School Selection and Placement System in Ghana.
7. The Concept of Perception.

Secondly, the chapter reviews empirical works relevant to the study.

Measurement and Evaluation as Selection and Placement Tools

Measurement is the process of assigning numbers to individual members of a set of objects or persons for the purpose of indicating difference among them in the degree to which they possess the characteristics being measured (Ebel, 1972). The main theme of measurement is the quantification of attributes; hence it is void of value judgment. Test scores of a student constitute the measurement of his achievement. The test scores are therefore the quantification of the student's

performance. Test scores assist educators in making decisions in terms of placement or grouping of students according to ability.

Evaluation is a term that has no universally accepted definition (Tamakloe, Amedahe, & Atta, (2005). However, evaluation generally involve gathering of information on a person, programme or process by trying to form value judgments about the effectiveness of what is being evaluated. Pagne (1997) explained that evaluation is a process by which qualitative and quantitative data are collected and processed to arrive at a judgment of value or worth of effectiveness. Evaluation is used to judge the worth, the goodness or short comings of a programme or system.

There are basically two forms of evaluation. These are formative and summative evaluation. Formative evaluation is diagnostic in nature and it leads to identification of strengths and weaknesses of a programme or system as a whole. Summative evaluation refers to the evaluation made at the end of an instructional programme or course. It is done after students have been exposed to the entire content of a course of instruction in relation to the established objectives of the programme. Hence, it is also referred to as terminal evaluation. The end of term, semester and year examinations that are conducted in the various educational institutions and settings are classical examples of summative evaluation processes. The Basic Education Certificate Examinations (BECE), the General Certificate Examinations (GCE) and the West African Senior Secondary School Examination (WASSCE), administered by the West African Examination Council (WAEC) are all forms of summative evaluation.

Summative or terminal evaluation results are used to make important educational decisions. In the first place, outcomes or results of summative evaluation are used to grade or certify students on successful completion of programmes and courses. Grading and certification at the end of the basic, secondary and tertiary education for the award of certificates, diplomas and degrees constitute typical summative evaluation functions in Ghana. Secondly, summative evaluation provides information for selection, promotion and placement of students in the school system.

The concepts of formative and summative evaluation are both relevant to the present study. The formative evaluation aspect of the study involves the assessment of the CSSPS as to whether its performance as at the time of the study makes it a better alternative to the manual system of selection and placement. The summative dimension of the study relates to the stakeholders' assessment of whether the CSSPS has achieved the objectives for which it was introduced.

The Concepts of Selection and Placement

Selection and placement activities typically focus on the student's knowledge, skills and abilities. Selection is concerned with screening and choosing between competing programmes, alternatives or students as subsumed in test scores. The selection of students for admission into Senior High Schools (SHSs) in Ghana is based on merit by ranking their test scores at the BECE. Similarly, the Common Entrance for Teacher Training Colleges as well as the erstwhile Common Entrance Examination to secondary institutions made use of

the test scores of students. Apart from the national selection exercises using test scores, teachers and school administrators organize late entrance examinations and interview for candidates for selection and placement purposes.

Furthermore, apart from selection and placement exercises in the educational institutions and systems, business organizations also engage in competitive employment and promotion policies, which also involve selection and placement. Applicants for positions are made to compete against each other for employment and promotion as opposed to the policy of employing or promoting anybody who has the minimum qualification. For higher positions, thorough screening and selection is done to pick the best fit-candidate. Variations exist in the basic processes of selection based on the organization's size, nature and the job position to be filled; hence, electronic technology processes are employed in some selection processes. One type of screening and selection uses computer software to scan applications submitted for keywords such as sex and codes. Some companies also use "text searching" an Artificial Intelligence (AI) software to scan, score and track applications for selection, appointment and eventual placement.

The ultimate purpose of selection is placement or fitting a student, candidate or person into the right institution, programme or job. Placement can therefore be said to be an integral part of selection. It involves putting a student into the right school and programme after the process of screening. The placement exercise is guided by availability of vacancies and possession of the requite

qualification or grade. Promotion from one class to another is based on the level of performance of the students at the previous level or examination.

Selection and Placement Mechanisms

Ajayi (2009) examined mechanisms designed for optimal approach to school placement. His examination focused largely on the design of school choice programmes for admission into American public high schools. Student preferences are evidently a key factor to consider in satisfying demand for schooling; firstly for student welfare purposes and secondly to ensure compliance to placement. Hence, an optimal school assignment/placement mechanism should take into consideration student ranking of the various available options. He noted that in an ideal world, demand will exclusively determine school placement. This is an open enrolment policy which will be particularly effective in low-income settings, where there are high returns to education. However, open enrolment is only feasible in a situation in which there are adequate resources to accommodate any level of demand for each school. Open enrolment classically provides a means to increase access to education but require an increase in the availability of secondary school places so that, every student wishing to attend a secondary school could do so.

In the majority of cases, there are limited resources and places. There is also a substantial variation in school quality; hence the government must device appropriate procedures, mechanisms and systems to allocate the available places. The most important issue in the placement system is how to discriminate between

students with respect to granting their preferred school choices and programmes. Several possible assignment/placement mechanisms that one can choose from co-exist including:

1. Merit based placement procedures.
2. Socio-economic equality system.
3. Random assignment.

The three selection and placement mechanisms are described in detail below.

The Merit – Based Placement System

The merit-based placement system involve tracking and sorting of students based on their abilities. Students are sorted and placed in homogenous ability classes for teaching, as it happens in Kenya. The merit- based placement is often a preferred mechanism for selection and placement, when the intention is for maximizing educational attainment. It is desirable when there is the belief that, there are benefits in sorting of students into homogeneous groups for teaching. In their evaluation of a randomized primary school tracking intervention in Kenya, Duflo, Dupas and Kremer (2008) found out that there is benefit to sorting of students throughout the distribution. Their study also found out that ability differences largely correlated with age differences in that at older ages, test scores may closely reflect intrinsic student ability. They again found out that merit-based selection and placement systems are beneficial to the extent that, the potential of attending a good quality and well endowed school provides students with an incentive for strong academic performance prior to secondary school and the

prospect of qualification and promotion to tertiary education and this provides incentives to sustained academic performance throughout secondary school.

However, there are some reservations about the merit based systems of placement. The argument is that merit is often determined through testing and that test performance is often determined by factors other than pure ability. In particular, test scores may be affected by the socio-economic background of the student (i.e. the parent's socio-economic standing). Merit-based placement policies therefore disadvantage students from low socio- economic backgrounds and minority groups. It will also reinforce the intra–generational transmission of low quality of educational attainment and poverty.

The Socio–Economic Equality Placement System

The primary goal of the socio-economic equality placement system is to expand access to education and to provide equal opportunities to students of all backgrounds. This system calls for a policy of affirmative action for low–income or disadvantaged students. However a system which combines merit–based systems with affirmative action has the potential to offer a means of rewarding academic achievement, while still addressing socio-economic inequality or imbalances. Affirmative actions in this context imply agreement, approval and a positive attitude to support the placement system and to make it succeed.

The Random Placement System

This involves the allocation of a lottery number to students and assigning them to a school in a randomly generated order. This has been a preferred approach in secondary school choice programmes in the United States of America (USA). It is often used in combination with other placement systems or mechanisms. One benefit of the random placement system is achieving a balanced mix of characteristics across schools. This appeals to the concept of fairness and it is also desirable for political expediency. However, the random selection and placement system raises concern about the relationship between student performance, heterogeneity and private benefit in that, private benefit may be lower than the social benefit in certain sub-populations.

Finally, an important issue that plagues school selection and placement systems is the extent to which official allocation are enforced in practice. Some systems explicitly accommodate additional factors such as placement of siblings or the history of previously attended schools into the official assignment process. In other cases informal allocation channels operate alongside the official mechanism and this leads to undermine the formal procedure.

In concluding this section on the various types of selection and placement mechanisms, it must be emphasized that the optimal design of placement mechanism is largely a function of the desired outcomes of the school selection and placement process.

School Selection and Placement System in Selected Countries

Employment and academic opportunities have become increasingly competitive since selection and placement is based on high academic qualification, performance, achievement and excellence. Added to this phenomenon is the constant increase in the number of students who seek to enter higher second cycle institutions from their respective levels of progress. Though the number of students entering the second cycle institutions progressively increases, there is little or no expansion in the infrastructure to accommodate them. Furthermore, the struggle for well resourced and good schools has generated stiff competition among students for placement in such schools thus leading to excess demand for places in such schools.

Some educational systems allow for open admissions, that is, students are admitted into secondary institutions and programmes of their choice provided they have made the qualifying grade (i.e. the open admission policy of the USA, government). However, the struggle for good, well resourced and first class schools coupled with excess of qualified students over the existing vacancies, common competitive examinations and admission are conducted for the students and the examination scores are used to select and place students in their chosen schools and programmes. Apart from the common examinations, various countries add other procedures and criteria for the selection systems hence, school selection and placement procedures in some selected countries are discussed in the sections following.

School Selection and Placement System in the USA

In the USA, a high level of attainment at a high quality school is the gateway to economic and professional opportunity. A high level of educational attainment also means credentials in terms of degrees, diplomas and certificates, a kind of educational seal of approval in the American society. Yet in the USA, high educational achievement is far readily available to some kind of people than others.

Hearns (1984) noted that despite the American idea of equal educational opportunities, affluent whites tend to rise to the top in the educational system while poor minority students tend to sink to the bottom. This is largely due to the "Tracking" system practiced in American public schools.

It is estimated that about 60% of elementary schools and about 80% of secondary schools in the USA use some form of tracking. (Hallinan,2003; Sadker & Sadker 2000).

Tracking is the system of selecting and placing of students in specific curriculum groups on the basis of test scores and other criteria and factors such as race, social class of parents and sex. Mensh and Mensh (1991) noted that students' performance on intelligence tests (IQ) is one of the most common criteria used for assignment to tracks. Sadker and Sadker (2000) explained tracking as a method of placing students according to their ability level into homogeneous classes or learning experiences. Through tracking, students are selected, grouped and placed in course programmes according to their perceived interests and academic abilities. Students of different abilities (i.e. low, middle,

and high) are assigned "tracks" of courses and programmes (i.e. vocational, general college-bound and technical). The groups or classes thus become homogeneous groups of learning experiences. Once placed in a particular class, it may be very difficult to move up from one track to another. Through tracking, many low income blacks, Hispanics, and Native Americans are channeled into low status and low quality courses.

The rationale and justification for the process of tracking is that Blacks, Hispanics and Native Americans have lesser academic ability as measured by test scores and teachers' opinion.

Another major part of the rationale for tracking is that, students learn better in homogeneous groups where everyone has the same level of talent or the same learning problems.

Furthermore, many people believe that it is easier for students with similar skills and intellectual abilities to learn together in homogeneous classes. Educators following this belief, screen, sort and direct students into courses based on their abilities and as a result send them down different school paths thus profoundly shaping their future.

Recent research suggests that homogeneous groups are beneficial only to students at the very top of the performance hierarchy (Gamoran and Nestrad, 1990; Robinson, 1990). The few fortunate students in the highest hierarchy profit from more stimulating classroom environment with better and more motivational teachers, smaller classes for management and at times more resources. A study in mathematics and science conducted by Oakes (1990) indicated that students in

lower tracks tend to get less qualified teachers and less stimulating approaches to teaching, poorer quality books and learning materials. This gives students in the lower tracks little if any chance to take the courses needed for preparation. However, the gains to the fortunate students in higher tracks do not outweigh the damage done to the much larger number of students that have been assigned to less challenging programmes through tracking; hence tracking produces no net educational benefit. Yet it continues to be the most widely practiced mode of selection and placement of American students in public schools.

Some teachers believe tracking makes instruction more manageable while others believed it is a terribly flawed system. Tracking is perhaps the greatest obstacle to equal opportunity in American schools. There are several serious draw backs in using IQ tests for tracking due to problems associated with IQ tests. In the first place, IQ tests assess only a small range of mental abilities mainly verbal and mathematical skills. They gauge little or nothing of a person's creativity, flexibility, insightness, ability to learn from context or skills in dealing with people.

Given these limitations, it is not surprising that IQ scores do not correlate highly with success in life (Winn, 1985). Furthermore, IQ tests are biased against students with certain backgrounds and experiences (Neil & Medina, 1989).

Apart from the tracking system in the U.S.A, some American States and Chartered schools employ the lottery system for selection and placement into Senior High Schools when the number of application exceed the available spaces. Tracking and differential access to higher education are evident in many nations

around the world. Japan's educational system mandates equality in school funding and insists that all schools use the same textbooks. Nevertheless, only the more affluent Japanese can afford to send their children to "juku" or "Cram" schools. These afternoon schools prepare high school students for examination that determine admission into prestigious colleges (Efron, 1997).

School Selection and Placement System in Zimbabwe

Zimbabwe's education system consists of 7 years of primary and 6 years of secondary schooling. The seven years of primary schooling culminate into four (4) nationally-set Grade 7 examinations in Mathematics, English, Shona or Ndebele and Content which is a combination of Science and Social Sciences. Students entering the first year of secondary school (grade 8) compete for places in the private, mission, day and boarding schools based on their grade 7 examination results as well as school-based interviews and placement tests. Government schools take students by zones and then allot the rest of the places to those with the best qualifications.

Secondary school in Zimbabwe consists of three levels: the Zimbabwe Junior Certificate (ZJC), which comprises forms 1 and 2; "O" level, this includes forms 3 and 4 and "A" level which comprises forms 5 and 6. Zimbabwe phased out the ZJC examination in 2001.From that time, based on their forms 1 and 2 reports, students are assigned to courses and tracked classes for their "O" level studies for forms 3 and 4.

School Selection and Placement System in Yugoslavia

Olave, Rajkovic & Bohanec (1989) explain that in Yugoslavia expert computer application systems are used to select and place children in a nursery school in the Ljubljana area. What led to selection and placement was excess demand for places in the nursery school. It was always confronted with the problems of selecting 300 out of the over 600 applications submitted. The school acceptance/admission committee most often could not satisfactorily explain to parents why their wards were not selected.

To solve the problem of selection and placement, a project was initiated by the school authorities to design, develop, test and implement a methodology that will support the selection committee and consequently the school authorities in their acceptance procedures, utilizing a computer-based decision making support system.

The main tool employed in the development of the decision support system to rank nursery school applications was the DECMAK (Bohanec & Rajkovic, 1987). It is an expert systems shell-for multi-attributes decision making. It is specifically a system of computer programmes that help the decision maker to cope with multi-decision making. The system evaluates, classifies and ranks the applications.

The DECMAK system has been successfully applied in about 30 practical decision making situations such as;

a. Evaluation of computer systems for enterprises
b. Selection of computer hardware and software for schools

c. Trading partner selection

d. Feasibility evaluation of a project

e. Selection of applicants for a given job

f. Performance evaluation of public enterprises

The expert system selection methodology worked perfectly. It was thus endorsed, adopted and recommended to higher authorities in the city of Ljubljana and the republic of Slovenia where it was applied on a larger scale.

It was noted that the explicit processing methodology was characterized by reduction in the dependence on subjective valuations. It also simplified the admission committee's work. Furthermore, it reduced the time of the deliberations and allowed them to explain without ambiguity the results of the admission process.

Finally, it was observed that the amount of work became smaller and consistencies of decisions were higher. As a consequence, the number of conflict situations between parents and nursery school authorities decreased.

School Selection and Placement System in Guyana

Bacchus (1966) explained that in Guyana, Secondary School Entrance Examination (SSEE) is taken by all primary four pupils to determine their placement into secondary schools. The reason for this is the lack of sufficient places in general secondary schools to accommodate all children leaving primary school. Based on the performance at SSEE and parental preference, children were offered places at;

a. A General Secondary

b. Community High

c. The Secondary Department of Primary School (SDPS)

As Guyana moved to a position of Universal Secondary Education (USE) the SSEE was phased out as a purely placement tool. The limited number of high schools in 1963 induced the UNESCO (UNESCO Report, 1963) to recommend that primary schools be restructured to create a "High School" department up to Form III.

The recommendation was accepted and primary schools became known as "all-age" schools. Students who could not make it through the "General Secondary School Placement" were placed in the SDPS and community schools. This practice still exists and constitutes the norm. Selection for secondary school placement is not based on success per se but on the number of places available and preferences for schools.

The Ministry of Education (MOE) at Guyana argued that selection and placement into the general secondary schools was based on the number of places available and an assessment criterion was applied to achieve the allocation. The criterion used was a percentage of scores obtained at the SSEE. The criterion has a strong academic element which was evidenced in the allocation of students with the highest scores to the top elite secondary schools. Bacchus (1966) studied the SSEE selection and placement system and established a relationship between the socio economic status (SES) of parents and performance of students at the SSEE. He found out that, students whose parents had a high socio-economic status,

performed excellently at the SSEE as compared to students from a low socio economic parentage who performed poorly. The implications of this phenomenon are that children from parents with high socio-economic status attend senior and junior secondary schools in relatively greater numbers than students with a low socio-economic status parentage.

The SSEE was therefore assessed to consider only the manifest aptitude and not the latent aptitude of students; hence many were inappropriately placed because of this early selection process. The SSEE selection and placement reinforced the class structure of the society through the allocation of students to various types and categories of schools. The allocation was largely based on the socio-economic status of parents. This was coupled with the incorporation of strong academic elements as well as classifying the schools as academic and non academic.

Bacchus (1966) concluded that one type or category of secondary school would not generate class distinctions and reinforce the class structure but would oppose them or at the very least beginning. Additionally, he noted that availability of placement vacancies as a criterion for allocating students to secondary schools was used to conceal the class policy of selection to the various types of schools. In conclusion, it was observed that the early selection process and the stratified high school system favoured high achievers and worked to the disadvantage of the students who were placed at the lower end of the secondary education.

School Selecting and Placement System in Taiwan

For forty years, that is, from 1960 to 2000 the sole criterion for selection and placement of Junior High School (JHS) students into Senior High School (SHS) in Taiwan was through writing an end of JHS examination known as the "Joint Examination". The Joint Examination is described as a make or break "Examination Hell" because final JHS students preparing for the examination go through a hell of pain and endurance. In the third year, the final year students go through a pressure-filled time when students attend the normal classes each day. The normal daily school hours were followed by another round of lengthy cram school sessions and endless homework at home. Students often study deep into the late hours of the morning in preparation for the joint examination with the aim of gaining admission into first class Senior High Schools (SHSs) in Taiwan.

The joint examination system, "the 40 year rite of passage" for young people entering secondary school became a target of public criticism in the sense that it was characterized by; unhealthy competition, narrow result-oriented teaching materials and curriculum as well as rote learning methods. It was further noted that the weakest aspect of the joint examination was that only the students who excel at test-taking came out on top.

Following the criticisms associated with the joint examination, the Taiwan educational authorities and the general public came to the consensus that the joint entrance examination should be abolished. However, before the introduction of the new system called the "multi track system" questions were raised whether it was the "right medicine to remedy the age-old problem" of the joint examination.

The question was also raised whether the "stuffed-duck" methods of teaching will disappear alongside the joint examination. Though the Ministry of Education (MOE) of Taiwan was applauded for the intention and plan to abolish the strenuous joint examination, many parents and educators were not completely sold on it. Despite the shortcomings of the joint examination system it was still preferred by many parents and educators.

The joint examination was eventually abolished and it was replaced by the "multi track system" in 2000. The multi track scheme for admission involve entry into Senior High School (SHS) or Vocational schools through three established channels (i.e. tracks) the three tracks are the:

Recommendation track (RT)

Application track (AT) and

Basic Competency Test (BCT) track

The multi track system placed emphasis on a student grasping special interest and talent in spatial relations, musical talent, athletic ability and intangible factors such as leadership qualities.

These were factored into the admission evaluation equation in addition to the test scores of the Basic Competency Test (BCT) which replaced the joint examination.

The Recommended Track

Under the multi track system, after the basic competency test which replaced the joint examination, authorities and Heads of JHSs are by policy mandated to forward a list of outstanding students from their school to SHSs, recommending them for outright admission on the basis of the students basic

competency test scores and additional criteria such as performance in interviews and achievement in science fair projects.

The Application Track

The second track involved in the multi track system is the Application Track. It involved application for admission into a Senior High School by the students seeking admission.

The Application Track therefore, involves the student applying to the Senior High School of his choice without the recommendation from the JHS from which he/she attended. For purposes of admission, in-school non-academic credentials such as leadership qualities and special talents are factorized into the evaluation equation alongside with the BCT scores.

The Basic Competency Track (BCT)

On the Basic Competency Track, the third avenue track or channel by which JHS graduates in Taiwan can gain admission to the Senior High School was purely by BCT scores and nothing else. Aside from the BCT scores Senior High Schools cannot use the applicant's test scores from the JHSs in their evaluation equation for admission.

On the basis of the multi track policy on admission into SHSs in Taiwan, through the BCT scores, the SHSs are mandated to reserve 50% of their enrolment vacancies for BCT track students. The BCT examination is conducted twice each year in March and June. Students who could not gain admission to SHSs by recommendation or were not satisfied with available choices after the March examination and placement, were allowed to have a second shot at the

BCT in June to enable them to enter SHS on the basis on BCT track. However the benefit and acceptance of the multi track notwithstanding, the multi track also had misgivings about it. Critics of the multi-track system noted that students from well to do background enjoy greater advantage under the new system.

Another criticism of the multi-track was that it served as a backdoor into the best schools for the affluent. Further problems that were associated with the new system (i.e. the multi-track) is the factoring of other variables into the admission evaluation equation. The additional variables include talents in piano playing and evidence of science project fairs. Another set of factors included in the evaluation equation are music talent, painting, artistic and athletic pursuits. Parents have to spend extra money to enable their children to acquire these talents at extra cost since the students have to enroll in the "cram schools" that flourished and offered these programmes after the abolition of the joint examination system. The perception was that cultivating the additional talent included in the evaluation equation has to do with a parents' socio-economic position in society but has nothing to do with the student's interest and inherent abilities. On this basis, it was claimed that, the joint examination was fairer than the multi track in its placement procedures.

Finally, it was claimed that the multi-track aimed at reforming the structure but neglected the values of Taiwan. To defend the new system authorities of the Taiwan MOE defended the multi-track system that there are 20% more vacancies in the SHS and Vocational schools than there are graduates of the JHSs. Hence, there is no shortage of schools to attend instead the pressure

on students comes from parents who want them to attend “first class star schools” under a notion that equates diplomas from these institutions with money and success.

The MOE of Taiwan noted that, though there is a steady demand for college-educated professionals as a result of changing economic conditions, the ratio of students opting to attend “college-bound” grammar based schools to those who opted for Vocational education has remained static at 39:61 since the 1970s. The Vocational programmes are geared toward developing specialized and career-oriented skills, hence, students preferred the vocational education to mere grammar-oriented schools.

The MOE consider closing this gap as an urgent task in the process of educational reforms they noted that “without complementary measures, then abolition the joint examination system in favour of the multi-track system is useless”. To complement the multi track a “community” system under which students would attend schools located near their homes where they would be encouraged to study in a less competitive environment, was encouraged and suggested in favour of attending “star schools” where other factors such as musical and athletic talents as well as scores from science fairs are factored into the evaluation equation to compel parents and students to attend extra classes referred to as cram schools where kids are stuffed with facts and formulas to make them perform well.

Selection and Placement of Students in Higher Education Institution in Turkey

Selection and Placement of Students in Higher Education institutions in Turkey went through series of historical developments ranging from pre 1950 to the present day. The trends are reviewed on era basis.

Before the 1950s

Before the 1950s, student selection to programmes of higher education was not felt to be a problem. The criteria for selection were based on graduation of examination by the individual high schools, and a matriculation examination administered under the auspices of Ministry of National Education. When the number of applicants exceeds the number of vacancies, grades of the matriculation examination was used as the sole criterion for selection.

The 1950s

From 1950, the rapid growth of student population prior to 1950 made the procedures inadequate for student selection and placement. Individual higher institutions therefore adopted their own independent student selection examinations and placement procedures. The procedures were deemed to be inappropriate because they were subjective essay task items which were difficult to assess objectively. Eventually less subjective, objective tests for selection and placement were adopted. Though objective testing was introduced, the aim of fair access to higher education could not be realized by means of the independent practices of selection by the individual higher institution.

The 1960s

The Inter University Board set up the Inter University Entrance Examination Commission in 1963. The Commission was tasked to look for a feasibility system of broadening the student selection and placement hence, the introduction of the Interuniversity Registration and Entrance Examination (IREE) which was ratified by the Interuniversity Board in December, 1963. A centralized system for admission of students to institutions of higher education started in the 1964-65 academic year.

For the first two years of the centralized system, the entrance examinations were prepared and administered by Ankara University, 1966-1973 by Istanbul University; then Hacettepe University in 1974. The scores of the entrance examination were used for selection and placement of students into higher education institutions.

The Early 1970s

In the 1974-75 academic year a central placement system, devised by Hacettepe University was implemented following the central selection examination.

In 1974 the Interuniversity board set up the Interuniversity Student Selection and Placement Centre, with the purpose of establishing a higher degree of continuity and uniformity in the administration of the entrance examination. In accordance with the Higher Education Law that went into effect in 1981 the Centre was attached to the student selection and placement centre (OSYM).

The Mid 1970s -1980s

The basic characteristics of the entrance examination administered by the (OSYM) from 1974-80 is summarized as follows;

A four–test battery was used, these comprised, a general ability test, mathematics and natural science test, Turkish language, literature and social science test and a foreign language test. The tests were administered at a single section on the same day and time at all the examination centres.

The test scores were transformed into standard scores. Using the standard scores, four types of composite scores were calculated to cater for the natural sciences, social sciences, natural and social sciences and foreign languages, consequently the candidates were placed according to their composite scores, the list of student college preferences and the number of places available in the higher education programme chosen. Before the central examination, candidates complete application forms on which they ranked a maximum of eighteen (18) education progammes in order of their personal preferences. The number was increased to thirty (30) in 1975 and reduced to twenty (20) in 1976.

Important and significant changes were made in the system of student selection and placement in 1981, with the introduction of a two stage examination, where the high school grade point average of candidates was taken into consideration in the calculation of the composite scores.

The student selection and placement system between 1981 and 1988 was similar to the present system. The only identifiable difference was that the 1981-88 system consisted of two stages that are:

The Student Selection Examination (OSS) and the Student Placement Examination (OYS) which was the second stage were administered approximately two months after the first.

Due to the high correlation between the two placement examinations (OSS & OYS) The Higher Education Council mandated that the two examinations be merged into one in 1999; that is the OYS was discontinued.

The Period 1999 - 2005

The basic features of the Student Selection and Placement System (OSYS) for undergraduates programmes were that, the selection and placement was done by a centrally administered examination system; the basis of the system was the Student Selection Examination (OSS) and its organization was undertaken by the Student Selection and Placement Centre (OSYM) which was affiliated to the Higher Education Council (Y O K).

In Turkey as in most other countries the demand for higher education far exceeds the places available. In view of this fact the Student Selection Examination (OSS) was fashioned to achieve two objectives, notably:

a. To ensure a balance between the demand for higher education and the places available in higher education institutions.
b. To select and place students with the highest probability of success in all the available higher education programmes , taking into consideration their preferences and performance at the (OSS), hence, the student selection and placement mechanism here after refer to as OSS was

designed to achieve these two basic gains in a fair and economical manner while meeting the necessary deadlines.

The Basic Structure and Principles of the Student Selection Examination (OSS)

1. Higher education in Turkey is essentially conducted at the universities and anyone wishing to enroll in any four or more under graduate programmes must take the OSS either as a complete or partial prerequisite for placement.
2. The main rules of OSS are set out in the Higher Education law. Its details are decided by the Higher Education Council (YOK) upon the recommendations of the OSYM. The legal status and the functions of the centre are also defined in the same law.
3. Each year, details of OSS and other relevant information for candidates are provided in two booklets published by the centre and approved by YOK. The booklets are called OSYS guides and constitute the legally binding rules and regulations of the system.
4. There are three main aspects of OSS:
    a. Application procedure
    b. The Examination itself.
    c. Evaluation of the results and placement of the selected students in the undergraduate programmes.

5 The examination consist of:

a. the student examination (OSS)

b. the foreign language examination (YDS). The YDS is administered approximately one week after the first to candidates wishing to attend higher education programmes in foreign language and literature.

Student Selection and Placement System in Kenya

Kenya introduced an 8-4-4 educational system. It involves eight years in primary school, four years in secondary and four years in university education. It was assumed that this structure would enable school dropouts at all levels to be either self – employed or get employment in the non – formal sector.

In January 2003, free primary education was introduced into the education system. As a result, primary school enrolment increased by 70%.However, secondary and tertiary enrolment did not increase proportionally due to fee paying at these levels.

In class eight (8) of primary school, the Kenya Certificate of Primary Examination (K.C.P.E) is written. The results of this examination are used for placement at secondary level. In form four of secondary school, the Kenya Certificate of Secondary Examination (K.C.S.E) is written, in eight subject categories. The average grade is based on performance in eight subjects. Where a candidate sits for more than eight subjects, the average grade is based on the best

eight subjects of the Kenya Certificate of Secondary Examination (KCSE). The grading of Secondary Examination is shown in the following table (ie Table 2)

Table 2: The Grading System of the Kenya Certificate of Secondary Examination

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Point	12	11	10	9	8	7	6	5	4	3	2	0

The total number of points is 81. The average grade is 81-8 which equals 10.1 (Aprox 10.0) which is grade B+ according to the grading system. Selection and placement for matriculation in the University is based on the best eight subjects and performance in the particular subjects that are relevant to the students chosen degree course.

Selection procedure into the Universities and other training institutions is based on the grade acquired by the student. Students with Grade B+ qualify to join one of Kenya's public universities which additionally determine their own minimum entry requirements. Students with Grade C+ qualifying to do a degree course at the University. However, due to competition and the existence of fewer places at the University, students with B and in a few cases B- and above are taken for degree courses at the Public Universities before considering those with grade C+. The rest join private Universities or middle colleges

School Selection and Placement Procedures in Trinidad and Tobago

Trinidad and Tobago runs a 7-5-3 system of education that is seven years primary, five years secondary and three years tertiary. The country places a high premium on education and therefore has a population which is almost universally literate. (Central Statistical Office 1987).

The 7-5-3 system includes variations of 7-5-4 or 7-5-5 time –table depending on whether or not a student chooses to attempt 'A' levels. Most children are sent to pre-school for up to two years before entering primary school. There is also free tuition at public primary, secondary and tertiary institutions.

Selection and placement into the free public primary and secondary school system is through writing of the Secondary Entrance Assessments Examination (S.E.A.E.).

In 2001, the Government of Trinidad and Tobago introduced the "Placement for every student" initiative. (ie. An open enrolment), hence all students that write the S.E.A Examination are automatically placed at secondary school. The more successful secondary schools were managed by denominational boards, though most schools are well endowed and equipped.

After five years in secondary school, students are assessed in chosen subject areas with Mathematics and English being compulsory. With this system, students are only required to show their competence in three other subjects in addition to English and Mathematics to qualify to be awarded a Certificate of

Ordinary Level Secondary Education (C.O.L.S.E) and after this, students may have the option to pursue an advanced level education or not.

In 2004, Trinidad and Tobago joined her counterparts of the Caribbean Islands by replacing the Cambridge Advanced levels with the Caribbean Advanced Proficiency Examinations (C.A.P.E). Students therefore apply to the University of West Indies (UWI).There are two options for selection and placement (ie. matriculation) at the U.W.I. Option A- requires passes in five subjects of which at least two must be at the C.A.P.E or GCE. 'A' Level; option B cater for an associate degree from an approved Carribbean tertiary level institution with a G.P.A of 2.5 and above. Competition for entry into faculties such as Medical Sciences and Engineering is often high and keen; hence students are selected based on the principle of the "Highest Scores First" (ie. on merit).

School Selection and Placement Systems in Ghana prior to the CSSPS

Prior to the inception of the Junior Secondary School (JSS) and the Basic Certificate Examination (BECE) as the entry assessment procedure for placement of qualified students into the second cycle institutions, the common entrance examination (CEE) was the assessment medium for qualification into the second cycle schools (ie. present day Senior High Schools).

The Common Entrance Examination consisted of a four (4) battery subject examination papers which were written in one day. The examinable areas were;

a. English Composition
b. English Comprehension, grammar and summary.

c. Mathematics and

d. General paper

A total of 400 marks were involved.

Apart from the general 50% pass total of two hundred (200) score, individual schools set their standard cut- off points for qualification and placement into such so - called endowed schools. Some of such cut off marks were as high as 300 and 350 out of a total of 400 marks. This created an inequitable access to secondary education.

The 1987 education reforms introduced, the Basic Education Certificate Examination (BECE) as the entry medium into second cycle institutions. The BECE involved examination in 9 subjects. These were taken over a period of five (5) days. The subjects are categorized into core and elective subjects:

Core Subjects	Elective Subjects
a. English	Agricultural science
b. Mathematics	Pre-Technical Skills
c. Integrated Science	Ghanaian Language
d. Social Studies	French

The entry requirements were based on aggregate scores of students. The scores were graded 1 to 9 with 1 being excellent and 9 a failure.

Again, apart from the legal aggregate of 30 as the cut-off aggregate for entry into Senior High School, individual endowed schools established their special qualification and placement standards which ranged from the terminology of “six-ones” and “nine-ones”. This phenomenon again created anxiety among

parents and unequal access to endowed schools to the detriments of the less endowed schools and especially the Senior High Schools (SHSs) situated in the rural areas and less accessible areas.

The process of selection and placement with reference to the Common Entrance and the Basic Education Certificate Examination (B.E.C.E) were manual. The manual system of selection and placement (MSSP) was cumbersome and characterized with a myriad of problems. The most prominent problems that were associated with the manual system were allegations of bribery, corruption, and favouritism.

Added to these problems are, the under listed as indicated by the CSSPS Report (2006)

a. Bribery and Corruption
b. Delay in selection and placement of qualified students
c. Loss of registration cards
d. Frustration, desperation and pressure on parents to secure good schools for their wards.
e. Wrong shading of names, code numbers and sex codes

Many commentators and stakeholders commented on the problems associated with the B.E.C.E. and the manual system of selection and placement of qualified graduates' into the Senior High School system. Somuah (2007) described the manual system of selection and placement as being characterized by administrative, logistic, technical, social and psychological problems. She indicated that the selection was regionalized and cumbersome .The selection was

based on aggregate scores of candidates. It also involves a large number of key players namely, District Education Directors, Heads of Senior High Schools, Technical and Vocational Institutes, parents and politicians, thus making the selection and placement process laborious and cumbersome.

Blay (2009) complained that some aspects of the 1987 education reforms have rather worsened the fortunes of their target group and denied them of short and long term opportunities. The critical issue he examined was the grading system of individual subjects in the (BECE) and their implications for candidate's admission into second cycle institutions through the manual system. The grading system made some top and popular SHSs especially those offering General Science and Business to set their cut-off points termed "ten ones" to determine the suitability of prospective students. The criterion for the cut-off point was the prerogative of the heads of institution and their oversight Board of Directors. The purpose was to get the best students out of the lot, to facilitate the turning out of excellent products and examination results. Hence at the manual selection centers, the heads only select cards of the "ten ones" candidates thus leaving others that have chosen the top schools as the first choice but with less attractive results to their fate.

Blay described the B.E.C.E and the manual selection process as a flaw in the selection criterion, perpetuated by lopsided grading policy which did not actually select the best/true students. He offered the solution of the reintroduction of Common Entrance selection process which in itself was manual in nature became obsolete and was replaced by the B.E.C.E manual selection process.

The deficiencies inherent and associated with the manual system of selection and placement has forced many organizations in addition to the MOE/GES to adopt an automated computerized system of placement, for example the National Service Scheme employed the CSSPS to select and post it's 2007 service personnel.

The Computerized School Selection and Placement System in Ghana

The CSSPS is the acronym for Computerized School Selection and Placement System. It is an automated merit-based computerized system which has replaced the laborious manual system of selection and placement (MSSP) of qualified BECE candidates into second cycle (Senior High Schools (SHS) and Technical/Vocational) institutions in Ghana.

The CSSPS was introduced in 2005 as part of the Ministry of Education (MOE) and Ghana Education Service (GES) grand plan of programmes and interventions intended to expand access and improve the quality of education through teaching and learning as well as curricular development. The implementation of progammes and interventions was facilitated with the support of stakeholders in education who also include Non-Governmental Organizations (NGOs) and development partners. The main objectives for the introduction of the CSSPS were; to improve and enhance efficiency in the school transition process (ie. transition from JHS to SHS); increase transparency, fairness and cost-effectiveness. Added to these was to increase access and participation in secondary education and finally to ensure equity and speed in the selection and

placement process (Ajayi, 2009).To be eligible for consideration by the CSSPS process, candidates have to complete specially designed cards and scannable forms for processing by a computer software which was specifically and specially developed for the system.

Since 2005, the process of selection and placement into SHS / TECH / VOC. has been computerized. The main objectives for the introduction of the CSSPS were:

a. Promoting efficiency
b. Transparency
c. Fairness
d. Equity and speed in selection and placement

The main features of the CSSPS are as follows;

Selection is based on scores of six subjects. A total of six subjects are used for selection; this comprises four core subjects and two other best subjects. The core subjects are English, Mathematics, Science and Social Studies for Senior High Schools. For technical institutions, Pre-Technical Skills replace Social Studies as the fourth core subject.

a. To qualify for selection and placement candidates' grade in any of the four core subjects should not exceed five.
b. The minimum grade for each of the best other two subjects should not exceed six and if added to the four core subjects must not exceed an aggregate of 30.

c. A candidate whose grade for any of the core subjects exceeds five or cancelled by the West African Examinations Council (WAEC) will be deemed as not qualified for selection and placement

Choosing Schools and Selection Programmes

Candidates are at liberty to choose the four mandatory numbers of Senior High Schools (SHSs) from any number of regions in the country, where they wish, under the CSSPS. This is due to the fact that, all selection and placement of candidates is to be done by the computer software in one location.

The number of schools will have four choices for schools and programmes as indicated here:

First choice – School and Programme

Second choice – School and Programme

Third choice – School and Programme

Fourth choice – School and Programme

Types of Schools and Selection Programmes

Candidates are free to select Senior High Schools, Technical/Vocational Institutes or both. However, the four choices must be listed in order of preference and the correct code for each indicated as directed on the scannable registration (entry) forms.

It is emphasized that candidates must make sure that their preferred programmes are offered in their schools of choice with reference to the WAEC

register of schools. Care must also be taken to quote or indicate the correct code for each programme or course selected. Candidates are free to select the same school four times. However, different programmes must be selected in each case. Similarly, if preference is on programme, then different schools offering the programme must be selected (CSSPS, 2005)

Selection and Cut-off Point (i.e. Working Mechanism of the CSSPS)

In the event of a tie between a cut-off point during the selection process, the computer will consider key subjects for the programme chosen and select the candidate with the highest score in that programme category. This means that a candidate must score high marks in a set of key subjects in order to qualify for a particular programme.

The key subjects at the cut-off point for the various programme categories are set out in Table 3.

Table 3: Key Subject at the Cut- Off Point for the Various Programmes

PROGRAMME	KEY SUBJECTS	PROGRAMME	KEY SUBJECTS
GENERAL SCIENCE	English, Mathematics, Science , Social Studies	BUSINESS	English, Social Studies, Science and Mathematics
AGRICULTURE	English, Mathematics, Agriculture Science	HOME ECONOMICS	English, Mathematics, Pre-Vocational Skills Social Studies
GENERAL ARTS	English, Mathematics, Social Studies, Science		
TECHNICAL	English, Mathematics, Science, Pre- Technical Skills	VISUAL ARTS	Pre-Vocational Skills, Social Studies

Source: Data from CSSPS secretariat

The subsequent Table (ie Table 4) illustrates the cut-off for the students, A and B who have obtained the same total scores for six subjects in the same programme category; using the General Science programme as an illustrated programme.

Table 4: Criteria for selection between two students with the same total score of 400

Subject	Student A's Scores Over 100	Student B's Scores Over 100
English	81	78
Mathematics	79	75
Science	70	65
Pre-Technical skills	70	72
Agriculture	50	38
Ghanaian Language	50	72
Total	**400**	**400**

From Table 4, it is observed that both candidates obtaining a total score of 400 out of 600 notwithstanding, Student A stands a better chance of being selected to offer the General Science Programme because his or her score in English is higher than that of B

The selection and placement criteria are further illustrated in Table 5.

Table 5: Illustration of the Application of the CSSPS Selection Criteria to Five Candidates

Subjects	Cand. 1	Cand. 2	Cand. 3	Cand. 4	Cand. 5
CORE					
ENGLISH	1*	5*	7*	-	1*
MATHEMATICS	3*	6*	1*		-
SCIENCE	3*	6*	6*		2*
SOCIAL STUDIES	3*	6*	1*	1*	2*
OTHERS					
R. M. E	3	4	1*	1	2
AGRICULTURE	2	4	4	1*	4
PRE. TECH. SKILLS	3*	5	5	2	5
FRENCH	3	5	5	1*	2*
GHA. LANG	3	4*	3*	1	1*
CATERING	-	4*	3	1	2
AGGR.	15	31	19		

Candidate 1: Qualifies and would be considered for selection

Candidate 2: Aggregate > 30: candidate does not qualify for consideration for selection. Grades ; Social Studies > 5, mathematics > 5, Science > 5

Candidate 3: Aggregate < 30: but candidate does not qualify. Grade in English > 5, Grade in Science > 5

Candidate 4: Aggregate incomplete (English cancelled)

Candidate 5: Aggregate incomplete (Mathematics cancelled)

The best two subjects are not the same for the five candidates.

Displacement: The CSSPS is a merit-based selection and placement tool; hence it is characterized by displacement features.

Selection and Placement on Merit (Working Mechanism of the CSSPS)

The CSSPS uses a deferred-acceptance algorithm for the school assignment (Ajayi, 2009). Under this algorithm, students are ranked according to their priority levels (i.e. test scores in the case of the CSSPS) they are then proposed as a match to their first choice schools in order of their test scores ranking. Students are assigned to their first choice school if there is a space available. If a student is unassigned in the first round, then the second choice is considered and the process repeats. In the second round, students can displace a student who was assigned in the first round if the first round student has a lower total score. The first choice candidate is therefore displaced by the second choice candidate as a matter of merit or better performance.

Under the deferred-acceptance algorithm, there is no penalty for ranking schools in an arbitrary order within the set of the first three Senior High Schools

(SHSs) selected. However, this is in sharp contrast to the Boston mechanism or system. In the Boston system, students are matched to their schools of choice in the same way as the deferred acceptance algorithm but then the Boston mechanism does not allow higher priority or students with higher scores to displace already selected and placed students in subsequent rounds of matching. Eventually, with the deferred acceptance algorithm which is synonymous to the CSSPS; if students are not assigned to in any of their three choices of schools they are eventually assigned to any school where vacancy exist in their district or community wherever possible.

The selection and placement as well as the matching of scores are done automatically by the computers without human interference. Hence, Bonney (2009) indicated that the electronic mode of selection and placement can not be manipulated for any underhand dealing, hence selection and placement is done on merit.

Finally, students are informed of their schools of placement and given thirty days to report at the assigned schools once the school year begins. The Heads of the Senior High Schools are expected or mandated to report any vacancies that exist in their school to the Ghana Education Service or the Ministry of Education so that the vacant spaces can be assigned to previously not place students.

Format for the Release of Results

Result slips are printed for all the candidates and parents to ascertain at a glance if the candidate has qualified or not (see Table 5 for analysis of result slips content)

Furthermore, in collaboration with the West African Examinations Council (WAEC) the CSSPS Secretariat prints the examination results and more crucially, sends the results to the school where the student has gained admission as well as copies to the Junior High Schools (JHSs) that the student attended with the objective of eliminating in one great swoop the anxiety and opportunity for corruption.

The CSSPS was developed and implemented to minimize the errors and problems that characterized the manual system and also to improve upon the selection and placement situation. Hence, Agyei-Twum (2006) further explained the technical working procedure of the CSSPS. He noted that instead of assessment based on a system of grades awarded for marks within a range using the manual system, the new system is based on raw scores obtained in four core subjects and two non core subjects. The student with the highest overall score gets admission first. Under the old system, two candidates A and B had 72, 64, 76 and 81 percent and 76, 62, 77 and 89 percent respectively. They would both receive aggregate 1, 2, 1 and 1 for the subjects and would have been treated as equals, but under the new system, candidate A would have received a score of 293, while B got 304. Intuitively, B is a better student and deserved to get admission earlier than A. The outcome of this system of selection and placement implies that the

best of children of this country are getting the opportunity to school and develop themselves irrespective of their backgrounds for the ultimate good of Ghana.

Again, Agyei -Twum (2006) further noted some benefits of the CSSPS.

a. The system builds up a detailed database on every J.H.S student who passes through the system. He explained that: the database is crucial for any serious analysis of the education sector.
b. Practically, the data constitutes the basis for ensuring student performance in the regions, district or area to facilitate proper target inventory.
c. The data will also inform future educational policy.

For the purpose of achieving the objectives of the CSSPS the Heads of Junior High Schools (JHSs), parents and students have roles to play. Some of the roles are noted below:

Roles of the Heads of Junior High Schools (JHSs)

To achieve the objectives of the CSSPS, head teachers of the JHSs are mandated to undertake specific activities which include to:

1. Keep a reliable record of performance of each student to assist in determining the choice of school and programme for candidates.
2. Ensure that all teachers cover the syllabus and assess pupils regularly.
3. Together with other JHS heads in the town, village or community organize the same and common end of term examinations.
4. Encourage group studies.
5. Respond promptly to all CSSPS data request.

6. Use a particular years' WAEC register of schools only because programmes may change every year in some schools.
7. Conduct post placement analysis with parents and candidates.
8. Ensure that every member of the BECE Registration Committee works effectively.

Roles and Information to the Students

These include:

1. Students are to be made aware that programmes are very competitive. They should therefore work hard to get the school and programme of their choice.
2. Assess them academically and choose a school that they are most likely to gain admission.
3. Spend more time with their books.
4. Successful BECE candidates who are placed but cannot attend the school that year should report to the JHS Head (CSSPS, 2005)
5. Examination malpractice will ruin their future. Results of an entire school can be cancelled even though all the students may not be involved directly.

Information to the Parents

These include:

1. Parents are requested to provide all the needs of their children.
2. They are mandated to provide conducive atmosphere for their wards to study and not to burden them with household chores.

3. Parents are to be made aware that once their wards have made up their choice of schools and programmes, no change can be made anymore.
4. In the event of non-placement after the first run, the students may be placed in a school with vacancy.
5. Finally, parents are to be made aware that it is not all schools that have adequate boarding facilities; hence, it is possible that wards may be made day students when the need arises.

Perception of Stakeholders on the CSSPS

The Concept of Perception

The word perception comes from the Latin words "perception, Percipio" and means receiving, collecting, action of taking possession, apprehension with the mind and senses. What one perceives is a result of interplays between past experience, including one's culture and the interpretation of the perceived. The BBC dictionary defines "perception" as "an opinion that one has about something or someone".

Szilagyi (1980) is of the view that, perception is the process by which individuals attend to incoming stimuli and organize or interpret such stimuli into a message that in turn indicate an appropriate action.

The theory of self-perception explained that perception is the way we perceive our own attitudes, preferences and failing by considering our thoughts, our behaviours and the situation in which it took place whether they are

situational constraints which explain the behaviour (Worchel, Cooper & Goethals, 1988)

In philosophy, psychology and cognitive science, perception is the process of attaining awareness or understanding of sensory information. Perception can therefore be considered as an awareness, understanding or intuition into something or the truth. Such insight enables the person concerned to make a qualitative distinction between objects, processes and issues in question.

Additionally, Lindsay & Norman (1977) explained that perception is the process by which organisms interpret and organize sensation to produce a meaningful experience of the world. It describes one's ultimate experience of the world and typically involves processing of sensory input. Perception in humans describes the process whereby sensory stimulation is translated into organized experience. The process of perception routinely alters what humans see. When people view something with a pre-conceived concept about it, they tend to make those concepts persist and see them whether they exist or not they must be there. This problem stems from the fact that humans are not able to understand new information without the inherent bias of their previous knowledge. A person's knowledge creates his\her reality as much as the truth, because the human mind can only contemplate that to which it has been exposed. When objects or issues are viewed without understanding them, the mind will try to reach for something that it already recognizes in order to process what it is viewing to give interpretations to it.

There is the idea that perceptual experience, is connected to thoughts, not only do thoughts arise based on what we perceive but perception also seem in many cases to provide us with justification for believing certain things to be in a certain way. It has also been noted that what one perceives is the result of the interplay between past experience including one's culture and the interpretation of the perceived. Perception can therefore justify us in holding various beliefs about the world.

The main function of perceptual experience is to provide us with the knowledge of the world around us. As opposed to creatures which lack the capacity for conscious reflection, human beings not only utilize perceptual information to navigate and survive but also gain theoretical understanding of the world they inhabit; of the many beliefs that man holds about the empirical world a large proportion are justified by appeal to experience. Hence, a desideration for any theory of perceptual experience is that it provides or at least is formulated so as to be compatible with an explanation of how perception can justify us in holding various beliefs about the world, events, phenomena and issues of the day. (Lindsay& Norman (1977).

Perception in humans describes the process whereby sensory stimulation is translated into organized experience. Perceptual processes are not public or observable except to the perceived himself whose percepts are given directly or in experience.

Empirical Review

The Empirical Review deals with specific School Selection and Placement Procedures. In educational institutions and systems, processes of selection and placement of students into school and academic programmes is through measurement and evaluation (Assessment) by making students to write a common and standard end of programme or course examination. For example, the BECE results are used by Heads of second cycle institutions or the CSSPS Secretariat to select and place students into appropriate schools and programmes such as Science, Business, General Arts and Vocational Studies programmes (Koomson, Brown & Edjah, 2006).

Addai-Mensah, Djangmah, & Agbenyega, (1973), did an appraisal of the educational system in Ghana in terms of the socio-economic implications of education in general, primary and secondary education in particular and the method of selecting primary school pupils into secondary school through the Common Entrance Examination (CEE).

They noted that, in Ghana, as in many other societies both developed and developing, education has been one major factor in determining a child's future socio-economic status. A good education almost invariably assures a person a place in the newly emerging "comfortable middle class". It was observed that, a good secondary education assures one the opportunity to proceed to the tertiary level of education, hence a lucrative job. On the other hand technical and vocational education which takes smaller proportions of students does not lead to

any lucrative employment in the Ghanaian society, neither has it been accorded its true value in the socio-economic advancement in Ghana.

The study further revealed that with reference to primary education there are fairly equal opportunities for all children but the compulsory fee-free primary education has brought in its wake many problems notably excess numbers of pupils seeking to enter secondary school. It was again observed that whereas the available places in primary schools is fairly large to accommodate any child who wants education to benefit from, secondary school places are extremely limited as only 5% of the children who enter primary class one are able to eventually gain admission into the secondary school. Furthermore, since secondary education is not free, majority of pupils who benefit from it come from families that can afford payment of fees.

Since a good and sound secondary education assures students the opportunity to advance to the tertiary level, hence, the selection examination to secondary school. The Common Entrance Examination has become the single most important examination in the life of any Ghanaian Child (Addae-Mensah et al, 1973). Similarly, Foster (1965) noted that it appears that secondary school education is the most crucial in the entire educational system in Ghana.

Addae-Mensah et al (1973) looked at the merits and demerits of the "Great Examination" the Common Entrance Examination which determines the fate of most Ghanaian school children from 8am to 1pm on a chosen day in March each year. The high selectivity that the Common Entrance Examination entailed had been the subject of much of public debate, hence some educationists advocated

for universal secondary education for all children. On this basis, an educational reform Committee (i.e. the Kwapong Committee) suggested a long term policy to reduce the duration of the basic elementary school course to six years and to develop the existing middle schools where pupils who do not gain admission into secondary school would go.

In Ghana, both parents and pupils are aware of the great variation in teaching and the general facilities that exist among basic schools and secondary schools; hence, their choice of basic school and secondary school to attend is well informed. Foster (1965) stated that, secondary school pupils are academically and vocationally oriented and that they do not attend school for their own comfort or amusement. He found that in a sample of 775 secondary schools, 76.7% schools were selected at the Common Entrance on the basis of the selected schools' examination results at the Ghana Certificate Examination (GCE). Hence, with the average national pass rate of 42%, most parents prefer to send their wards to the old well-established and endowed schools whose pass rate at the GCE is above 60%. The high selective character of the Common Entrance Examination coupled with the high competition for entry into secondary school has made competition to the well-endowed schools even keener than the national average.

The Common Entrance Examination unintentionally resulted in the creation of two classes of schools; the special private international or preparatory schools and the public schools. The child in the public school must be exceptionally bright to enter a first class school. As a result of competition for limited places in the secondary schools many parents deprived themselves of

many basic needs and sacrificed to send their wards to private schools where their children will be specially trained to pass the Common Entrance Examination.

It was noticed that at the Common Entrance Examination stage, one was dealing with "two culturally different" groups of students namely the private schools and Public schools. However, these groups of students were not significantly different in ability.

Addae-Mensah, et al (1973) opined that any selection mechanism must satisfy the condition that it is testing the potential ability of all groups equally, thus minimizing the effects of other variables such as the socio-economic background of candidates. They observed that the main criterion used in most schools is the application of the scores obtained at the Common Entrance Examination (CEE). But findings of their research cast serious doubts on the validity of using the Common Entrance Examination scores directly in selecting secondary school students because the direct use of the raw scores favour children from the preparatory schools over the public schools. They supported their observation with analysis of the performance of the first twenty (20) candidates admitted into endowed secondary schools on the basis of the direct raw scores from the Common Entrance Examination. The study analyzed performance of the top twenty students that were admitted into St. Augustine's College Cape Coast in 1972. Out of the twenty (20) students, eleven (11) were from the preparatory schools whiles nine (9) were from the public schools. Granting that the Common Entrance Examination results were a valid selection mechanism, one will expect

that about the same proportions of students will be among the top twenty (20) students at the end of the first year in secondary school.

However, at the end of the first year at secondary school there were only six out of the eleven students from the private schools as opposed to thirteen from the public schools. Even out of the six students within the top twenty (20) from the private or special schools, only four were in the original top twenty (20) at the Common Entrance Examination level while eight out of the original nine from the public schools were in the original twenty (20) from the Common Entrance Examination. This outcome hold strongly for the other top schools studied. They include Achimota College and Prempeh College. This therefore suggests that the Common Entrance Examination had overestimated the abilities of students in the private schools and underestimated the abilities of students from the public schools; hence, it is not a valid selection mechanism or tool for selecting and placing students into secondary schools. They suggested that the raw Common Entrance Examination scores for both the private and public school candidates should be normalized using appropriate statistical tools. It was indicated that frequency distributions and percentile norms will provide good methods for comparing the results (i.e. scores) of the two different groups (private and public schools) taking the same examination (CEE). Such norms graphically attained through the use of Ogives could be a useful tool or method of verifying as well as improving the validity of the test selection mechanism. By means of Ogives, correction factors can be worked out to even out the differences between the two groups. Prediction can then be made on the basis of corrected factors. For

example at the tenth (10^{th}) percentile, a mark of 215 scored by a public school pupil will be equivalent to a mark of 224 scored by a private school pupil. Such a technique for upgrading the scores of the public school pupils will give the two groups, roughly equal chances of getting the secondary schools of their choice.

From the discussion it is noticeable that, Addae-Mensah, et al (1973) have demonstrated that the unreliability and invalidity of the Common Entrance Examination as a mechanism for selecting students into secondary schools (i.e. Senior High Schools) in Ghana, by noting that the Common Entrance Examination overestimated the ability of the private school students while underestimating the ability of the public school students. They however, admitted that it will be practically difficult to set a test that is "culturally free" so as to overcome the problem of dissimilarities between the private schools and the public schools. They therefore recommended a statistical approach in terms of the use of percentiles or Ogives that will help to improve upon the selection process based on the Common Entrance Examination results.

Ajayi (2009) did a specific and empirical work on the selection and placement system in Ghana. He employed a unique dataset on Ghana's education system to examine school choice, student selection and placement. He noted that admission of Junior High School (JHS) students into Senior High Schools (SHS) is based on student's ranking of their three school choices and their performance in the Basic Education Certificate Examinations (BECE). He used a schooling demand model, and student's ranking of their three top selected schools to examine how preferences vary with student characteristics. He found out that a

strategic student would rank his/her schools of preference based on choice and the likelihood of admission while naive students make choices based purely on preference and school popularity.

He further observed that educational qualification strongly correlated with employment outcomes thus workers who complete the secondary school certificate examinations (SSCE) at the end of Senior Secondary School are more likely to work in the public sector and the formal private sector where wages are higher with job security. Hence, failure to advance to the SHS may have substantial implication for future welfare (see Ajayi's Education qualification and Employment Outcomes in Table 6)

Table 6: Education Qualification and Employment Outcomes

	None	BECE	SSCE	Bachelor	Total
Civil Service	3.91	0.82	9.36	36.27	6.37
Other Public Service	5.47	3.27	12.32	34.31	8.23
Parastatal	0.87	0.61	0.00	0.98	0.59
Non-Governmental Organizations	0.00	0.00	0.49	0.98	0.17
Co-operatives	0.52	0.20	0.49	0.00	0.34
International Organizations	0.52	0.20	0.00	1.96	0.42
Private Sector Formal	10.94	15.93	32.02	20.59	17.15
Private Sector Informal	72.92	76.69	43.35	3.92	63.41

Table 6 cont'd

Agricultural Business	4.43	1.84	1.48	0.98	2.55
Other	0.52	1.23	0.49	0.00	0.76
Observations	384	489	203	102	1,178

Source: Ajayi,(2009) using Ghana Living Standards Survey, 2005

Ghana inaugurated a Computerized School Selection and Placement System (CSSPS) in September 2005 with the aim of increasing transparency and enhancing the efficiency of the school transition process. Prior to this, the student selection and school admission was carried out manually at annual meeting of head teachers in each region following the announcement of examination results; students were required to choose all three of their schools from a single region to reduce the administrative burden of manual school assignment. Additionally, student selection cards were misplaced and parents routinely complained that school assignment was based on preferential treatment and not actually on merit because well – connected students were admitted into top and well – endowed schools even if they did not have the requisite grades.

The computerization mechanism was therefore designed to address several of the deficiencies inherent in the manual system. Under the CSSPS, students could pick schools from multiple regions and there was to be limited interference from headmasters in the school selection and assignment process. The CSSPS uses a deferred acceptance algorithm for school assignment (Gale and Shapley, 1962). Under this algorithm students are ranked according to their priority levels

(ie. test scores in the case of the CSSPS); they are then proposed as a match to their first choice school in order of their test score rankings. Students are assigned to their first choice if there is a space available. If the student is unassigned in the first round then the second choice school is considered and the process repeats. In the second round, students can displace a student who was assigned in the first round if the first round student has a lower examination score. Under this algorithm, there is no penalty for ranking schools in an arbitrary order within the set of the three first choice schools. This contrasts with the Boston mechanism which does not allow already assigned or placed students to be displaced in subsequent rounds. There are therefore clear incentives for making a strategic first choice under the Boston mechanism which does not apply under the deferred acceptance algorithm.

Students who are not placed or assigned to any of their chosen schools are assigned to any available space in their district or whenever possible. However, students who receive the passing grade may not be assigned to any school at all, if there are no spaces or vacancies remaining.

Students are informed of their placement and are given thirty (30) days to report at their schools of placement once the school year begins, Heads of SHS are then required to report any unfilled places to the Ministry of Education, so that the spaces can be allocated to previously unassigned students. Ajayi (2009) revealed and exposed the fact that there is imperfect compliance to this regulation and anecdote evidence suggests that certain schools under report the availability of spaces in order to reserve some which they then allocate at their own

discretion. To eliminate this problem, as a result of Ajayi's revelation in the 2009 school placement exercise; many schools were assigned more students than the declared places.

During the current school assignment process, the CSSPS makes enough effort to address socio economic inequality. Several schools were evaluated and assigned a deprivation score arranging from 0 (non – deprived) to 9 (highly-deprived). These scores are used to scale up test – scores for students from low – resourced Junior High School (JHS) and the rural schools in an attempt to compensate for the disadvantages of attending under resourced schools especially in the rural areas. It can be noticed that successive attempt of improvement in the mechanism of selection and placement into SHSs is to enhance efficiency and to increase access into second cycle institutions since there is always excess demand for placement over the existing vacancies in the secondary schools. This situation is worsened by the yearly increase in the number of JHSs in Ghana (See Table 7 below). The increase in the JHSs is accompanied by a corresponding increase in enrolment in the JHS. However, there is no significant increase in the number of SHSs. The number only increased from 492 in 2005/06 to 700 in 2006/07 and stagnated there. Evidence in Table 7 also show that placement into SHSs fluctuates. That is, the number in the 2005 / 06 academic year was 384,455. This rose to 485,742 in 2006/07 but fell to 454,681 in 2007 / 08.

Table 7: Secondary School In Ghana (2006 – 2008)

Year	No. of JHS	No. JHS Students	No. of SHS	No. of SHS Students
2005/06	8497	1,121,887	492	384,455
2006/07	9334	1,170,801	700	485,742
2007/08	9507	1,224,964	700	454,681

Source: Ghana Education Service and Ajayi, 2009

Summary of Literature Review

Government's educational authorities and systems globally, painstakingly try to evolve and design school selection and placement systems or mechanisms that will provide optional outcomes, satisfaction and acceptance to all stakeholders in the educational enterprise. Theoretically, selection and placement mechanism and systems vary from open enrolment or admission to strictly merit-based systems.

Open enrolment systems thrive on availability of adequate resources and the intention of governments concerned to increase access to education, especially secondary education, provided the candidate meets the minimum requirements criteria. An example of the open enrolment system is the "Placement for every student initiative" in Trinidad and Tobago in 2001.

Merit-based systems are competitive systems which involve sorting and discriminating between students who compete for limited vacancies in prestigious and highly endowed schools and programmes. The merit-based systems such as the Boston, displacement algorithms and the CSSPS are preferred for the purposes of maximization of academic attainment. Such systems make students to take academic work seriously.

Measurement and evaluation play an important role in the school selection and placement processes. The selection and placement processes are preceded by standard, common and competitive examinations such as the Joint Examination in Taiwan, the Basic Education Certificate Examination (BECE) in Ghana and the Kenya Certificate of Primary Education (KEPE). The test scores of these examinations are processed, ranked and used for the selection and placement of candidates into the chosen schools and programmes.

Placement systems have evolved and developed over the years. These range from the subjective observation and grouping systems such as tracking in the USA and Kenya through laborious and cumbersome manual systems to modern systems. The modern systems include the automated and computerized systems such as the CSSPS in Ghana and the DECMAK expert computer system shell for multi-attribute decision-making systems in Yugoslavia.

Basically, perception is seen as the opinion that one has about something or someone. The theory of self-perception explained that perception is the way we perceive our own attitudes, preferences and failing by considering our thoughts, behaviours and the situation in which it took place.

Perception in terms of philosophy, psychology and cognitive science is considered as attaining awareness, understanding or intuition into something or truth; such gaining of insight into situations or issues enable people to make qualitative distinction between objects, processes and issues in question. It has also been observed that the process of perception routinely alters. what humans see. When people view something with pre-concerned concept about it, they tend to make those concepts persist and see them whether they exist or not, they must be there.

Additionally, it has also been noted that what one perceives is the result of the interplay between past experience including one's culture and the interpretation of the perceived. Perception can therefore justify us in holding various beliefs about the world. Hence its main function is to provide us with the knowledge of the world around us.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter describes the research design, the population, the sample, and the techniques of sample selection. It also describes the instruments that were used in data collection, pre-testing of instruments, the procedure followed in collecting data and the method of data analysis.

Research Design

The study sought to investigate the stakeholders' perception of the CSSPS as a tool for selecting and placing students into second cycle institutions. This involved exploring the conditions that necessitated the designing and implementation of the CSSPS, its characteristics and the perceptions major stakeholders have of the system. Against this background, the study was structured basically within the framework of descriptive survey research design. The researcher chose the descriptive survey design because the study aimed at finding out the factors that made the manual system of placement unsuitable and also to draw conclusion on whether the computerized system is a better option than the manual system based on the responses from the questionnaire and interview.

Descriptive survey has a universal usage, that is, it can be used both in qualitative and quantitative research analysis. It has varied advantages including producing good amounts of responses from wide range of people. Also it gives a clear meaning of events and seeks to explain peoples' perceptions and behaviours on the basis of data collected at a point in time. In addition its can be used with greater confidence with regards to particular questions of special interest or value to the researcher.

According to Ary, Jacobs & Razavieh (1990), descriptive research studies are designed to obtain information which concerns the current status of the phenomenon. As such, descriptive research studies are directed towards determining the nature of a group or a situation as it exists at the time of study. Oppenheim (1966) noted that the descriptive surveys tell us how many members of a population have a certain characteristics or how often certain events occur. Hence, Best & Khan (1993) indicated that descriptive statistical analysis, limits generalization to the particular group of individuals observed and that no conclusions are extended beyond the group. Any similarity to those individuals outside the group under study cannot be assumed. Descriptive surveys are meant to describe one group and that only; they focus on ascertaining the status of a defined population in relation to certain variables.

McMillan (1996) explained that a descriptive study mainly describes and provides an understanding of a phenomenon usually with simple descriptive statistics and it is particularly valuable when an area is first investigated as in the case of this study. Descombes (2003) observed that surveys are associated with

getting information “straight from the horses own mouth” and is purposeful and structured. The relevance of the descriptive survey approach to the researcher in the field of education has been noted by Creswell (1994), Gay (1991), and Fraenkel and Wallen (2002). They agreed on the view that the descriptive research method provides opportunities for researchers to gain valuable insights into current status of phenomena with respect to variables or conditions in a situation.

Despite the advantages associated with descriptive research, Descombes (2003) pointed out that though surveys cover a wide scope, the data produced are likely to lack much by way of detail or depth on the problem investigated. Again, the emphasis on wide and inclusive coverage limits the degree to which the researcher can check on accuracy and honesty of responses. Similarly, Creswell (1994) contended that errors and inadequacies of descriptive survey research in education appear at many points, from the way problems are initially chosen and defined through selection of population and sample, to items construction and analysis of the resulting data. Fraenkel and Wallen (2002) are also of the view that, there is difficulty of ensuring that the questions to be answered by respondents when using the descriptive survey are clearer and not misleading as results can vary greatly depending on the exact wording of questions or statements. The disadvantages of the descriptive survey notwithstanding, the descriptive research design was considered the most appropriate for this study on the evaluation of the CSSPS and how the stakeholders perceive it. This is because the basic characteristics of descriptive survey such as its usefulness in assessing

the present status of things, and its ability to collect data from a large group of people were found consistent with the focus of the study.

Population

A target population is the aggregate of cases about which a researcher makes generalizations. Thus, it is the unit for which information is required and actually studied. In the study, the target population was all parents, students and heads of Government Assisted second cycle institutions (public SHSs, Technical and Vocational) in the Greater Accra Region which have their names registered in the WAEC register as well as Ghana Education Service and Ministry Of Education (GES/MOE) personnel, and opinion leaders.

Fraenkel and Wallen (2002) noted that, accessible population is the researcher's realistic choice. In this study, the accessible population was the endowed second cycle institutions within the Accra Metropolis and the least endowed ones within the peripheries of Accra (rural schools in Greater Accra Region), with their institutional heads, students, parents with wards in the above schools and GES/MOE personnel at the district, regional and headquarters who directly and indirectly oversee the administration of the institutions.

The accessible population from which the sample was taken totaled nine hundred and nine-four (994). The composition of the accessible population is as follows:

Average student population = 463

Average parent population = 463

Heads of SHSs in the study = 38

GES/MOE personnel = 30

Total = 994

The process of determination and representation of the sub-populations in the sample is shown in (appendix F.)

Sample and Sampling Procedure

A sample is a proportion of the population selected for observation and analysis. According to Sarantakos (1997) a sample enables the researcher to study a relatively small number of units in place of the target population and to obtain that which is representative of the whole target population. The importance of a sample lies in the accuracy with which it mirrors the target population.

Many researchers, including; Saunders, Lewis & Thornhill (1997), indicated that, using a sample enables a higher overall accuracy than does a population in certain situations. Furthermore, Saunders et al. (1997) are of the view that, probability sampling is most commonly associated with survey-based research where the researcher is required to make inferences from a sample about the population under study for the purpose of answering research questions.

In this research work, probability sampling was adopted for sample selection. In probability samples the chance or probability of each case being selected from the population is known. This implies that, it is possible to answer research questions and achieve objectives which require the researcher to estimate statistically the main characteristics of the population from which the

sample was drawn; hence probability sampling is often associated with descriptive survey research (Saunders

et al ,1977).

Elaborating on the sample size, Nwana (1992) stated that, there are certain non-definitive practices among social researchers, that one can adopt. One of such practices was that if the population is a few hundreds, then a 40% or more sample will be appropriate; if many hundreds, as in the case of the present study then 20% will suffice; if a few thousands, a 10% sample will do; and if several thousands are involved then a 5% or less sample size will do. Similarly, Dale (1986) also suggested, a minimum of 20% sample size for a population of a few hundreds, while Asamoah-Gyimah & Doudo (2007 p.85) also stated that 10% - 30% sample size of a population of few hundred is sufficient for generalization purposes.

Fraenkel and Wallen (2000) provided some guidelines with regard to the minimum number of subjects in a sample. They noted that, for descriptive studies a sample with a minimum of 100 is essential and for correlation research, a sample of at least 50 is deemed appropriate to establish the existence of relationships.

This study being a descriptive survey and using the 20% as a guide, the sample size applicable is 306 and the breakdown for the categories of the sub-population in the sample is as follows:

Table 8: Composition of Sample

Sub-population	Number of Respondents
Students	134
Parents	104
Heads of SHSs	38
MOE / GES	30
Total	**306**

After determining the sample size, members of the sample were selected through stratified random sampling which is a way of selecting a sample in such a way that identified sub-groups in the population are represented in the sample in the same proportion that they exist in the population.

The stratified random sampling is a desirable sampling procedure where the universe is sub-divided into a number of sub-universes called strata and sampling is carried out independent of each stratum.

Some condition necessary for stratified sampling are:

1. The Universe is divided into strata and each stratum has distinct information of interest to the researcher.
2. Units in the same stratum are homogeneous in character but heterogeneous with respect to the units of the other strata. (Amedahe & Asamoah-Gyimah, 2005; Asamoah-Gyimah & Doudo,2005)

Stratified sampling was followed by simple random sampling to select individual members into the sample. Simple random sampling is where the unit of

the universe is chosen in such a way that each has an equal chance of being selected and that each choice is independent of any other choice.

In simple random sampling the probability that an elementary unit of the universe will be selected at any given draw is the same as that of the first draw. In this study the lottery technique of simple random sampling was adopted to select the sample members.

The student class register was adopted as the sampling frame for the purpose of selecting the students and the parents while the staff list was used in the case of the MOE/GES personnel. The population of the Heads of SHSs was automatically determined in terms of the schools used for the study, which is the Government assisted SHSs in the Greater Accra Region who are listed officially in WAEC register. The simple random sampling was used so as to limit the incidence of biases and also to ensure that the sample is a representative one. The representation of students and parents in the sample was based on stratified sampling and simple random sampling. The specific numbers represented in the sample are shown in Tables 9 and 10.

Table 9: Representation of School Categories in Sample

Categories of School	Number of Schools	Number of Students
Very Endowed	3	11
Endowed	14	49
Fairly Endowed	10	35
Least Endowed	11	39
Total	**38**	**134**

Source: Derived from Data

Table 10: Representation of Parents in Sample

Category of school	Number of Schools	Number of Parents
Very Endowed	3	8
Endowed	14	38
Fairly Endowed	10	30
Least Endowed	11	27
Total	**38**	**104**

Source: Derived from Data

Research Instruments

Nwana (1981) indicated that educational data may be gathered or obtained through a variety of ways. Hence, the researcher used two tools to obtain the requisite data to address the research questions. These were questionnaire and structured interviews. Together they provided a rich source of detailed primary data and information. The questionnaire and interview schedules were selected as research instruments because they are known for their validity and reliability.

Questionnaire

Three categories of questionnaire (see Appendices B, C, & D) were designed and distributed to heads of institutions, parents, and students. A mixture of closed- ended and open- ended items were used. The close-ended items enabled the researcher to limit responses that were within the scope of this study and therefore remained focus on the statement of the problem and the main

purpose of the study. The main issues that the closed ended items addressed include issues on biographic information, where the responses are dichotomous and therefore require "yes" or "no" "response". For example, the closed-ended items address issues of placement into the student's school and programme of choice.

On the other hand, the open-ended items dealt with issues that require respondents to express or state their opinion on particular issues. For example, the item that dealt with challenges to the CSSPS. Here respondents were required to list or mention five challenges that militate against the functioning of the CSSPS. Few open-ended items were included in the questionnaire to elicit free and unrestricted responses from the respondents on the key issues of the study as stated above.

Interview

A structured interview schedule (see Appendix E) was prepared and administered to MOE/GES personnel. The purpose of the interview was to elicit first hand information on the key issues contained in the questionnaire.

The interview guide has a number of advantages when conducted effectively; the interview can produce in-depth data which cannot be generated by the questionnaire. A second advantage of the interview is that, it is more flexible; hence the researcher can adapt it to suit each respondent. Probing questions were asked which lead to subsequent follow-up questions and responses. Amadehe & Gyimah (2005) (CCEUCC p183).

Another benefit from the interview is that, it may results in more accurate and honest responses, especially when a good rapport is established between the interviewer and the interviewee. Furthermore, the researcher in this case can follow-up with incomplete or unclear responses by asking additional probing questions where further issues have to be clarified.

Nonetheless, using interview guides are also expensive. In addition, it requires a great deal of communication and research skills to solicit relevant information from respondents. To solve the above problems:

1. The interview was conducted personally by the researcher.
2. Fixed and appropriate interview time periods were decided by the researcher before the start of the interview.
3. Questions were kept simple and straight to the problem to prevent time consumption

Pre- Testing Instruments

The research instruments were pre-tested for validity and reliability. The purpose for pre-testing was to sharpen the instruments thereby correcting possible weaknesses, inadequacies, omissions and ambiguities that may characterize the items.

The pilot testing was conducted in two districts and one municipality in the eastern region. The pre-test group was selected from the Eastern Region because they had similar characteristics as the sample selected for the study in

terms of age and status. The districts randomly selected for the pre-test were Yilo and Manya Krobo districts and the municipality was the Koforidua Municipality. The senior high schools that were included in the initial study were Akro Senior Secondary/Technical Odumasi, Akuse Methodist Senior Secondary/Technical, King David Senior High Secondary / Technical Institute and Ghana National Senior High.

The Eastern Region was selected for the pre-testing exercise because it is adjacent to the Greater Accra Region. Educational characteristics are similar in both regions. The towns and districts have urban and rural characteristics that are similar to those in the Greater Accra Region. The least endowed schools in the pilot study are Akuse Methodist Senior High School, Somanya Technical School, Odumase Secondary Technical School and Mampong Day Presby Senior High School.

A few inherent weaknesses that were identified in the questionnaire were corrected. Suggestions and corrections especially by the Headmasters were incorporated in the items to reshape them to reflect realities in the schools. Similarly, some items were restructured based on the advice and recommendations from the research supervisors. The processes of reshaping, restructuring and test proof of the questionnaire to a large extent contributed to the validation of the research instruments.

The Cronbach (1957) co-efficient alpha was used as measure of internal consistency since it determines the reliability of the instruments for both the pilot study and the main study.

The Cronbach co-efficient alpha was used because most of the items in the questionnaire were multiple score items that had responses ranging from strongly agree, agree, strongly disagree, disagree etc. The co-efficient of alpha with respect to the pilot test was 0.792; for heads of institutions, 0.739 for students, 0.815 for GES/MOE personnel and 0.7185 for parents.

Data Collection Procedure and Instrument Administration

In this study, both secondary and primary data were utilized. The sources of the primary data were the questionnaire and interviews conducted by the researcher with limited assistance from teachers in terms of the administration of the questionnaire. The secondary sources of data were media article publications, journals and Ghana Education Reform Reports.

For the purpose of collecting relevant and objective data, the instruments were personally administered by the researcher to respondents. The personal interaction with respondents was done to ensure that adequate instrument copies reached the appropriate respondents.

Together with the introductory letter from the Institute for Educational Planning and Administration UCC and the Greater Accra Regional Director of Education, the researcher introduced herself and explained the purpose of the study to respondents.

The questionnaires were administered to the target respondents. Similarly, appropriate interview periods were arranged with respondent interviewees. The

data collection process covered three months. The process of instrument administration was as follows:

In the case of the heads of SHSs the questionnaire were personally handed over to the heads.

The researcher returned in two weeks to collect both the completed questionnaire of the school heads and the student enrolment figures. Similarly, specific times between 3.00pm-5.00pm were fixed by the researcher and the school heads for Saturdays and Sundays when students were free and ready, for the administration of the questionnaire. Then, under the supervision of the researcher the students completed the items individually, after which the completed questionnaire were collected by the researcher. In some cases teacher/tutor parents were administered with the questionnaire and where possible on Parent Teacher Association (PTA) meeting days, questionnaires were administered personally by the researcher and in few cases by teachers that the researcher developed acquaintance with and performed as research assistants temporarily. Additionally, with the presence of the researcher it was made certain that the correct and appropriate instrument type was handed to the respondents.

Conduction of Interview

The interview sessions were conducted personally by the researcher with thirty (30) GES⁄ MOE personnel. The interview lasted for two months. The sessions were between working hours from 8.00am-5.00pm. Meeting times were priorily arranged between the researcher and the respondents.

Data Analysis

Osuala (2005) described data analysis as the ordering and breaking down of data into constituent parts and performing of statistical calculations with raw data to provide answers to the questions initiating the research. Data analysis in this study started with editing of the responses of the questionnaire and interview schedules. The edited responses were then coded and scored. The scores of each respondent were summed up across the items to obtain their final raw score. Simple percentages and frequency tables were used to analyze the items. Both descriptive and inferential statistics were used. Descriptively, the major themes in the data were used to discuss the data and to make inferences. Percentages were used to discuss the data quantitatively.

The data was edited, grouped and fed into the computer and thus arranged in tables, frequencies and percentages for analysis and discussion. The chi-square (χ^2) was used to find whether there was any significant change in enrolment of the least endowed schools and also whether there is a significant change in the imbalance in the choice of endowed schools. Furthermore, documents from news paper publication were mainly employed to support analysis of data in the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter focuses on the analysis and discussion of data collected on the perceptions of stakeholders on the introduction of the Computerized School Selection and Placement System (CSSPS) in Ghanaian Senior High Schools (SHS).

The purpose of the study was to evaluate and determine if the CSSPS has become a better alternative for selection and placement than the manual system. Specifically, the study examined the impact of the introduction of the CSSPS on the enrolment of the least endowed schools, and the impact on the choice and preference for well endowed schools.

Biographic Data on Respondents

A sample of three hundred and six (306) respondents was engaged in the research and it comprised thirty-eight (38) Public Second Cycle School Heads, thirty (30) Ministry of Education and Ghana Education Service (MOE/GES) personnel, one hundred and four (104) parents and one hundred and thirty-four (134) students. The sex of respondents is shown in Table 11:

Table 11: Sex Distribution of Respondents

CATEGORY	Male %		Female %		Total %	Total
	No.		No.			
School Heads	23	60.5	15	39.5	38	100
MOE/GES Pers.24	80	06	20	30	100	
Parents	69	66.3	35	33.7	104	100
Students	84	62.7	50	37.3	134	100
Total	**200**	**65.4**	**106**		**34.6**	**306**

Source: Compiled from study area.

Table 11 shows the sex distribution of respondents. Out of 306 respondents 200 (i.e. 65.4%) were males while 106 (34.6%) were females. The gender representation of the sample schewed in favour of males. This phenomenon arose due to the male dominance of the students in the second cycle institutions and workplaces. This is an indication that gender parity both in schools and workplaces is yet to be achieved.

Table 12: Distribution of Respondents by Age

Age Range	Respondents							
	School Heads		MOE/GES Per.		Parents		Students	
	No	%	No	%	No	%	No	%
11-14	86	64.1						
15-19	40	29.9						
20-24	08	6.0						
25-29	02	1.9						
30-34	36	34.6						
35-39			03	10.0	14	13.5		
40-44	04	10.5	07	23.3	10	9.6		
45-49	02	5.3	05	16.7	03	2.9		
50-54	19	50.0	12	40.0	21	20.2		
55-59	13	34.2	03	10.3	04	3.8		
60-64					13	12.5		
65+					01	1.0		
Total	**38**	**100**	**30**	**100**	**104**	**100**	**134**	**100**

Source: Compiled from study area

The age distribution of respondents has revealed that the majority of heads of schools and the MOE personnel are within the ages of thirty five to fifty nine (35-59). This is an indication that they have had rich working experiences and therefore have also witnessed previous school selection and placement systems

and therefore stands in a good stead to assess the new system and express their candid opinion on it. The parents constitute about one-third of the sample. The ages range from 25-65 years. The varied age groups bring variety in their perception on the CSSPS. The students constitute the young group. It is the group on which the system greatly impact since they are placed in the schools and also read the academic programmes.

Table 13: Occupational Distribution of Adult Respondents: Parents, School Heads and MOE/GES Personnel

Occupation	No	%
Civil Servants	21	12.2
Public Servants	146	84.9
Self-Employed	04	2.3
Pensioner	01	0.6
Total	**172**	**100**

Source: Compiled from data

The occupational distribution from Table 13 revealed that public servants constitute the greatest group of the adult respondents. Together with the civil servants they constitute 97.1% of the group. This might indicate that they possess a good knowledge about educational issues and are better placed and enlightened to express cogent views about educational issues.

Table 14: Professional Rank of the Heads of Senior High Schools

Rank	No.	%
Director (II)	17	44.7
Deputy Director	13	34.2
Asst. Director I	08	21.1
Total	**38**	**100**

Source: Compiled from SHSs in the Greater Accra Region.

Table 15: Number of Years of Headship

Rank	No. of Years of Headship	%
Assistant Director I	07	18.4
Deputy Director	16	42.1
Director II	15	39.5
Total	**38**	**100**

Source: Compiled from SHSs in the Greater Accra Region.

Table16: Range of Years Served by Senior High School Heads

Rank in years	No. of Years Served	%
0-4	--	--
5-9	05	13.2
10-14	23	60.5
15-20	10	26.3
Total	**38**	**100**

Source: Compiled from SHSs in the Greater Accra Region.

According to the Administration Hierarchy of the Ghana Education Service, the rank of the Heads of Institutions indicated that they are Senior Rank Officials in the Service as shown in Table 14. The period of headship ranged from seven (7) to fifteen (15) years as shown in Tables 15 and 16. The range of headship also indicated that all the heads had experienced the selection and the placement of students with reference to both the manual and the computerized systems. The manual selection and placement for the study period covered the years 2002-2004/2005 while the CSSPS era covered 2005-2007/2008.

From this stand point, their observations on the operation of both systems were based on experience.

Classification of Government Assisted Schools in the Greater Accra Region

Based on the availability of infrastructure and teaching resources, the heads of institutions classified or designated their schools under the following titles; very endowed, endowed, fairly endowed and least endowed.

The resultant classification of schools is represented in Table 17.

Table 17: Classification of Schools Based on Infrastructure and Teaching Resources

Classification	No.	%
Very endowed	03	7.9
Endowed	14	36.8
Fairly endowed	10	26.3
Least endowed	11	28.9
Total	**38**	**100**

Source: Compiled from SHSs in Greater Accra Region

From Table 17, it could be inferred that only three (3) schools were very endowed, fourteen (14) were endowed, ten (10) were fairly endowed with eleven (11) least endowed schools. Taken together, the fairly and least endowed schools formed the largest group of schools. From the data obtained from the field, out of the 38 public schools, there existed 21 underprivileged schools that constitute 55.2% of the Senior High Schools in the Greater Accra Region.

The 11 identified least endowed schools are:

1. Ada Secondary Technical School-Sege
2. Amasaman Secondary Technical School
3. Manhean Secondary School
4. Ningo Secondary School
5. Ngleshi Amafro Secondary School
6. Osudoku Secondary School

7. Presby Day Secondary School - La
8. Oreilly Secondary School
9. Presby Secondary School-Teshie
10. Nungua Secondary School
11. Ashaiman Day Secondary School

Apart from classifying the schools based on their resource base, the schools were further characterized as Urban, Semi-Urban, Rural/Community, based on their location

Table 18 illustrates the distribution of Public/Government SHSs in the Greater Accra Region with reference to location.

Table 18: Classification of School Based on Location

Location	No.	%
Urban	24	63.2
Semi-urban	10	26.3
Rural/community school	04	10.5
Total	**38**	**100**

Source: Compiled from study area

The outcome of the survey of Public Senior High Schools in the Greater Accra Region indicated that there is in the Greater Accra Region twenty-four (24) urban-based public schools, then ten (10) semi-urban and four (4) rural-based senior high schools.

The schools identified as Rural by their heads of institutions are:

1. Amasaman Secondary Technical School
2. Ningo Secondary School
3. Ngleshi Amafro Secondary School
4. Osudoku Secondary School.

Main Data

Effects of CSSPS on Enrolment in Least Endowed Schools

One of the reasons given by Ghana's Educational Authorities for introducing the CSSPS was to increase access to Senior High Schools. Increase in access implied that enrolment in the existing schools especially least endowed schools would increase significantly.

The study therefore sought to examine the impact of the CSSPS on enrolment in the least endowed schools. This objective is captured in Research Question One (RQ1a) which states:

What has been the effect of the CSSPS on enrolment in the least endowed schools?

To determine the impact or effect of the CSSPS on enrolment in the least endowed schools (LES) a null hypothesis and its alternative were thus formulated that:

H_o: There is a significant increase in the enrolment of the LES with the introduction of the CSSPS.

H_A: There is no significant increase in the enrolment of the LES after the introduction of the CSSPS.

The null hypothesis was tested using the chi-square statistic.

The result is at 0.05 alpha level and the results are presented in Table 19.

Table 19: Trends in Enrollment in the Less before and After the Introduction of the CSSPS

School	Total Enrolment									
	Pre CSSPS			Total	Post CSSPS					
				Total	Increase in Enrolment					
	2002		2003		2004			2006	2007	2008
Ada Secondary Technical School	310	255	300	865	295	200	201	696	-169	
Amasaman Sec/ Technical School	212	259	241	712	295	360	370	925	213	
Manhean Secondary school	215	221	195	631	281	250	250	781	150	
Ningo Secondary School	113	105	117	335	156	183	222	561	226	
Ngleshi Amafro Secondary School	195	185	191	571	200	185	180	565	-6	
Osudoku	250	205	208	663	200	168	160	518	-135	

Table 19 cont'd

Secondary School									
Presby Day	400	440	422	1262	422	442	406	1270	+ 8
Secondary School									
Oreilly	339	335	379	1053	358	292	135	785	-268
Secondary School									
Presby	400	300	294	994	327	300	165	792	-208
SecondarySchool									
Teshie Nungua	350	308	363	1021	305	305	308	918	- 103
SecondarySchool									
Ashaiman Day	208	218	213	638	301	305	305	911	273
SecondarySchool									
Total				**8745**				**8732**	**-13**

Source: Compiled from study area

Information from Table 19 on the trends on enrolment in the least endowed schools prior to the CSSPS and the post CSSPS indicate that some schools experienced substantive cumulative increase in their enrolment after the inception of the CSSPS. The schools that experienced substantive cumulative increase in their enrolment with their respective increment are Amasaman Secondary/Technical School (213), Ningo Secondary School (226) and Ashiaman Secondary School (273). On the contrary some schools also experienced substantive cumulative decrease in their enrolment these are Ada Secondary Technical School (-169), Oreilly Secondary School (-268) and Presby Secondary School – Teshie (-202)

The total cumulative effect on enrolment on the LES after the inception of the CSSPS is that there is a cumulative decrease in enrolment by thirteen (13) after the inception of the CSSPS as indicated by data in Table 19.

Total enrolment from 2002-2005 is 8743 and total enrolment form 2005-2008 after the introduction of the CSSPS was 8732 producing a difference of -13. To find out whether the change in enrolment was statistically significant, the chi-square test was applied at 0.05 significant level the critical value obtained was 18.31.

However, the calculated value of the chi-square (x^2) is 252.69. With the calculated figure being higher than the critical value, the conclusion is that the introduction of the CSSPS has not significantly increased the enrolment of the least endowed schools (LES) hence the null hypothesis was accepted.

Furthermore, views of stakeholders on education (i.e. Heads of Senior High Schools (HSHS), parents and MOE personnel) on enrolment in rural schools were sought and analyzed. Data obtained from the questionnaire and interview guide is presented in Table 20.

Table 20: Location, Distribution and Cumulative Enrolment of Rural Schools in the Greater Accra Region

School	District	Location	Cumulative Enrolment
Ningo SHS	Dangme West	Old Ningo	226
Ngleshi Amafro SHS	Ga West	Torkuse	-6
Manhean Sec. /Tech. School	Tema	Tema New Town	150
Osudoku Sec/Tech. School	Dangme West	Asutuare	-135
Net Total Enrolment			**129**

Source: Compiled from SHSs in Greater Accra Region

Information from Table 20 indicates that the CSSPS had a mixed impact on the enrolment of Rural Senior High Schools in the Greater Accra Region of

Ghana. Ningo Senior High School at Ningo in the Dangme West District experience a cumulative net increase of 226 students, while Osudoku Secondary/Technical School at Asutuare also in the Dangme West District registered a negative cumulative enrolment of -135. However, the four identified rural Senior High Schools taken together holistically registered a nominal increment of 129 students over the period of three years from 2005 to 2008 that the study covered with reference to the introduction of CSSPS as an instrument of selection and placement of students into public second cycle schools in the Greater Accra Region and as a whole.

Data generated from Heads of Senior High School and GES/MOE personnel who have access to statistical information on enrolments in second cycle schools are presented in Tables 21 and 22.

Table 21: Response from Stakeholders on Enrolment in Rural Schools

Stakeholder Response	Yes	%	No	%	Total
MOE/GES Personnel	28	93.3	02	6.7	30

Source: Data compiled from Stakeholders

Results from interviewing MOE/GES personnel on the effects of the CSSPS on enrolment of rural schools as represented in Table 21 indicate that, the stakeholders in the name of MOE/GES held the view that the CSSPS has contributed significantly to increasing the enrolment in the rural schools, that is, 93.3% of the respondents affirm the increment. However, 6.7% of the respondents

do disagreed completely that the CSSPS has effectively contributed to the increase in enrolment in the rural schools.

Additionally, information was gathered from SHS heads and parents on their view on the impact of the CSSPS on enrolment in rural schools. These categories of respondents were to complete questionnaire to express their opinion on the issue. The information gathered is presented in Table 22.

Table 22: Response from Stakeholders on Enrolment in Rural Schools as a Result of the Introduction of the CSSPS

Stakeholder	Response						Total
	Yes	%	No	%	UD	%	
Parents	63	60.6	39	37.5	02	2.1	104
SHS Heads	22	57.9	15	39.5	01	2.6	38
Total	**85**	**59.9**	**54**	**38.02**	**03**	**2.1**	**142**

Source: Compiled from study area.

It could be inferred from Table 22 that majority of the stakeholders, that is, both the parents and SHS heads are of the view that the introduction of the CSSPS has positively impacted on the rural SHSs by increasing their enrolment. Approximately, 61% of the parents and 58% of the SHS heads have indicated that the introduction of the CSSPS has helped to increase the enrolment of the rural SHSs. However, it could be noted that a section of the parents and SHS heads

were not certain, whether the new system has actually contributed significantly to the increase in enrolments in the rural schools. Their views were represented as uncertain, thus, 2.1% and 2.6% of the parents and SHS heads, respectively, were not convinced beyond doubt that the CSSPS has contributed to the increasing enrolments in rural SHSs in the Greater Accra Region.

In summary, it could be stated that most of the stakeholders, notably the MOE/GES personnel, SHS heads and the parents have indicated that the CSSPS has nominally contributed to increment in the enrolment of rural SHSs but in the minority, a few of the respondents do not totally agree on this view. The study again sought to find out the factors that were responsible for the marginal increase in the enrolment of rural Senior High Schools in the Greater Accra Region; hence, Research Question 1b was posed that:

What factors are likely to increase the enrolment of the rural Senior High Schools in the study area?

The marginal increase in the enrolment of the rural SHSs had been attributed to a number of factors. The factors and their percentage ratings are analyzed on Tables 23 and 24. Data is based on responses from questionnaire by SHS heads, and parents and interview with MOE/GES personnel.

Table 23: Factors Responsible for the Apparent Increase in Rural SHSs Enrolment after the Introduction of the CSSPS as seen by Heads of SHSs

Factor	No.	%
Limitations of preferential treatment by SHS Heads	10	26.3
Poor performance by rural students at BECE	26	68.4
Lack of Internet facilities	02	5.3
Total	**38**	**100**

Source: Compiled from study area

Information from Table 23 indicates that, the heads of SHSs identified poor performance by rural students at the BECE as the main factor responsible for the increase in enrolment of rural SHSs. Since their scores at the BECE could not qualify them for placement in very endowed SHSs namely Presbyterian Boys', Achimota and Accra Girls' Senior High Schools, hence, they are eventually placed in rural schools where vacancies exist to swell up student population in the rural schools 68.4% of the SHS heads supported this assertion. Similarly, information from the interview of MOE/GES personnel also supports this point as shown by the 53.3% approval in Table 24. Poor performance at the BECE by the disadvantaged rural students is responsible for the increment in the enrolment of

rural SHSs. Since the ranking of the scores by the CSSPS on merit eventually place them in rural schools where vacancies exist.

The second important factor that contributed to the apparent increase in the enrolment of rural SHSs as shown in Tables 23 and 24 is the limitation of preferential treatment given to students who did not qualify to deny qualified students of their chances. It is also important to note that, the most significant increments occurred in Ningo Senior High School (226) and Manhean Senior High School Tema (150) which is quite close to urban areas (See Table 20). One notable factor that contributed to the net negative cumulative enrolment in the Ngleshi Amafro and Osudoku Schools was their extreme rural location at Turkuse in the Ga West District and Osudoku in the Dangme West District respectively. However, the four rural Senior High Schools cumulatively registered an increase of 129 in students' enrolment.

Table 24: Factors Responsible for the Increase in Rural SHSs Enrolment after the Introduction of the CSSPS as seen by GES/MOE Personnel

Factors	Respondent GES/MOE	
	No	%
Limitations of preferential treatment by SHS Heads	09	30
Poor performance by rural JHS Students at BECE	16	53.3
Lack of Internet Facilities	05	16.7
Total	**30**	**100**

Source: Compiled from study area

A remote factor in relation to the increase in rural senior high school enrolment was related to modern technology. Rural schools and students lack access to internet facilities to access relevant information to supplement knowledge provided them by the teachers. This limited their knowledge base hence the poor result at the BECE. The poor results restrict them to the rural schools to eventually increase the enrolment of the rural senior high schools. From Tables 23 and 24 respectively 5.3% of heads of Senior High Schools saw the limitation of internet facilities in the areas as a contribution factor to BECE results of rural candidates 16.7% of the MOE/GES personnel support this view.

Effects of CSSPS on Placement of Students

One of the main problems that characterized the manual system of placement was the excessive delay in the placement of qualified students in their school of choice, hence the introduction of the CSSPS to minimize the problem. The second objective of the study was therefore to find out; the extent to which the CSSPS has minimized the delay in placement of qualified students.

Research Question 2 states that: To what extent has the introduction of the CSSPS provided quick placement of students into Senior High Schools?

Table 25: Response of Parents, Students and Heads of SHS on the extent to which the CSSPS has minimized delays in Placement of Qualified Students in SHSs

Respondent	Response						
	A	%	UD	%	DA	%	Total
Heads of SHS	36	94.7	2	5.3	-	-	38
Parents	77	74	10	9.6	17	16.3	104
Students	118	88.1	5	3.7	11	8.2	134
Total	**231**	**83.7**	**17**	**6.2**	**28**	**10.1**	**276**

Source: Compiled from study area

Data from Table 25 was generated from questionnaire administered to the respondents namely; the heads of SHS, parents and students within the study area. The questionnaire item sought to find out the extent to which the introduction of

the CSSPS has minimized the delay in the selection and placement of qualified BECE candidates into second cycle institutions.

It could be inferred from Table 25 that the CSSPS has to a large extent minimized the undue delay in the selection and placement of qualified BECE candidates. Specifically, approximately 95% of the Heads of SHSs agreed that the CSSPS has minimized the delay in the placement exercise especially the first batch of students. Similarly, approximately 74% and 88% of the parents and students respectively agreed on this view. Again, over 94% of the school heads and students agreed that the CSSPS has minimized the delays in placements. On the other hand, 16.3% of the parents disagreed (D) that the CSSPS has minimized the delay in placement of the qualified BECE students.

But on the average, only 10% of the respondents' disagreed (D) that the new system has improved upon the delay in the placement exercise.

Similarly, personnel of the Ghana Education Service (GES) and the Ministry of Education (MOE) were interviewed on the same perception of delay in the placement exercise. Their views are presented in Table 26.

Table 26: Response of GES/MOE Personnel on the extent to which the CSSPS has minimized the delay in Placement of Students

Respondent	Response						Total	
	A	%	UD	%	DA	%		
GES/MOE Personnel	26	86.7	-	-	04	13.3	30	100

Source: Compiled from data on interview

Information in Table 26 expresses the stance of the MOE/GES personnel on the extent to which the CSSPS has limited the delay in placement of qualified students into the SHSs. It is observed that 86.7% of GES/MOE personnel agree (D) that the CSSPS has achieved its objective of minimizing the delay in placement exercise. However, 13.3% of the GES personnel disagreed that the delays have been minimized by the inception of the CSSPS.

To reinforce the findings that the CSSPS has contributed significantly to the reduction in the delay and in the placement of new students during the study period, the GES and the Daily Graphic of Tuesday, October 14 (2008) stated that out of 173, 315 BECE candidates who qualified for placement, 139, 478 including 1,579 re–entry candidates have been placed in SHS and technical institutions leaving only 3,837 who will be placed by the end of October 2008. The GES also indicated in the editorial column of the Junior Graphic of Wednesday, November, 19 (2008. pp. 12 – 25) that it has placed 98% of qualified students and that mopping up exercises and final placement will move the number from 139, 478 to 156, 242.

The results have revealed that there is a significant reduction in the delay of placement of qualified candidates mostly for the first round placement. However, the subsequent placement was characterized by various degrees of delay in placement. But generally considered the CSSPS has considerably reduced the phenomenon of delay in the selection and placement of newly qualified SHS students.

Perception of Major Stakeholders on the CSSPS

This section of the study examined the perceptions of the major stakeholders in the educational enterprise. The major stakeholders in the context of education and the CSSPS are the Ghana Education Service/ Ministry of Education personnel, Senior High School (SHS) Heads in the public SHS in the Greater Accra Region whose schools are listed in the WAEC register of schools. Perceptions of these stakeholders were examined with the reference to the following statements of:

1. Whether the CSSPS should be stopped or continued
2. Challenges to the implementation of the CSSPS

These statements are encapsulated into research question three (RQ3) which states that:

> What are the perceptions of the major stakeholders on the CSSPS?
>
> Respondents were requested to tick in the appropriate box their opinion about the need to abolish the CSSPS as a selection and placement tool due to numerous criticisms against it since 2005. Information from Table 27 infer that majority of the stakeholders disagree with the suggestion that the CSSPS should be abolished as a selection and placement mechanism in placing qualified JHS candidates into their chosen SHSs and programmes. On a whole, approximately 84% of the stakeholders; namely parents, students and heads of SHSs who completed the questionnaire strongly disagreed on the abolition of the CSSPS as a placement tool.

Specifically, approximately 95%, 80% and 84% of the heads, parents and students respectively want the CSSPS to be retained. However, on the other hand approximately 14% of the respondents want the CSSPS to be abolished as a selection and placement tool.

Similarly 90% of the MOE/GES personnel in response to the interview question on abolishing of the CSSPS indicated that it should be maintained as shown in Table 28 while 10% indicated that it should be abolished. It is therefore worth noting that despite the level of misgivings about the CSSPS as captured in newspaper publications, majority of the stakeholders prefer that the CSSPS should be maintained. It can therefore be inferred from the results on the retention of the CSSPS that, the majority of stakeholders in the study to a large extent agree to the retention of the CSSPS as the main mechanism for selection and placement of students in SHSs.

Table 27: Response Distribution of Stakeholders on the Abolition of the CSSPS as a Selection and Placement Tool for JHS Graduates

Respondent or	Response						Total	
Stakeholder	A	%	UD	%	DA	%	Respondents	%
SHS Heads	-	-	02	5.3	38	94.7	38	100
Parents	17	16.4	04	3.8	83	79.8	104	100
Students	21	15.7	01	0.7	112	83.6	134	100
Total	**38**	**13.8**	**07**	**2.5**	**231**	**83.7**	**276**	**100**

Source: compiled from study area

Table 28: Response from MOE / GES Personnel on the Abolition of the CSSPS as a Selection and Placement Tool

Respondents	Response				Total
	Yes	%	No	%	
GES/MOE Personnel	27	90	03	10	30

Source: Compiled from study area

Table 29: Why the CSSPS should be Continued

Opinion/Perception	Stakeholders							
	Parents	%	SHS Heads	%	Students	%	Total	%
Makes selection easy and early placement	10	9.6	13	34.3	18	13.4	41	14.8
No more payments of bribe to school heads	46	44.2	01	2.6	14	10.5	61	22.1
Reduce pressure on school heads by parents and pressure groups	15	14.5	04	10.5	12	8.9	31	11.2
Gives true picture of students' performance hence placement in correct schools	10	9.6	20	52.3	62	46.3	92	33.3
No more preferential treatment by school heads	23	22.1	-	-	28	20.9	51	18.4
Total	**104**		**38**		**134**		**276**	

Source: Compiled from study area

On the agreement that the CSSPS should be maintained as the selection and placement tool for JHS graduates into SHSs, respondents were made to rank the views in the questionnaire. The data generated is represented in the Table 29.

A critical observation and analysis of the contents in Table 29 indicate that, perceptions of stakeholders vary significantly with regards to placements of qualified JHS graduates in the SHS system. The variation in the perception as observed and inferred from Table 29 relates to the social status of the respondent and where the respondent is located within the equation of the stakeholders, that is, either as a student, an educator or a parent. The strongest accepted view or reason that underpinned the continued use of the CSSPS as the sole placement tool is that it gives the true picture of the students at the BECE, hence the selection and placement is done purely and exclusively on merit. This is in consonance with one of the cardinal reasons that informed the introduction of the CSSPS.

Approximately, 52%, the heads of SHSs and 46% of the students accepted this view. However, the parents were indifferent to this view as a strong and valid point to allow the CSSPS to be maintained as a sole selection and placement tool into the SHS system. This is inferred from the Table 29 in terms of the low rating of 9.6% by the parents. Furthermore, 34.3% of the heads of SHSs and 13.4% respectively see the facilitation and early placement view as the second important reason for the continued use of the CSSPS as the placement tool. On the other hand, parents do not support this view as strong enough to merit the use of the

CSSPS as a placement tool. This rejection of the view is justified by the low rating of 9.6% given to it.

Further interpretation of information from Table 29 reveals that the parents highly rated the view points (2) and (5) in the above table which involve minimization and elimination of bribery and corruption and preferential treatment given by SHS heads to less qualified students and influential personalities in society respectively. Points two (2) and five (5) were rated 44% and 22.1% respectively by the parents. On the contrary, the SHS heads attach less importance to points two (2) and five (5) as depicted to the low percentage responds of 2.6% payments of bribe and 0% percent for preferential treatment for influential personalities and unqualified candidates.

Juxtaposing the view of the parents on the one hand and the heads of SHS and students on the other, it is evident that the main and core reasons of the parents for the continuation of the CSSPS as valid selection and placement tool hinge on the system's reduction and elimination of vices or negative practices such as favouritism, bribery and corruption that were previously associated with admissions on the parts of the SHS heads. These points were endorsed by the relatively high rate response of 44.2% and 22% respectively.

On the other hand, the students and SHS heads endorsed the continued use of the CSSPS as the sole tool for selection and placement on the basis of the advantages inherent in the system (i.e. the CSSPS) on the basis of points one (1) and four (4) in Table 29. The views or points deal with the facilitation of selection and placement earlier than it used to be and selection and placement being based

purely and exclusively on merits and therefore reflecting the true performance level of the graduates at the BECE.

The two apparent positions or outcomes have been summarized by Bonney (2009) by indicating that the CSSPS was introduced in 2005 to reduce misdemeanour behaviour in terms of allegations of corruption and favouritism that characterized the manual system. This point mirrors the position of the parents. The operation of the CSSPS is also aimed at promoting efficiency, transparency, fairness, equity and speed in the placement process. This position also mirrors the points of the SHS heads and students.

Table 30: Results of Interview Conducted for MOE/GES Personnel on whether the CSSPS Should be continued

Respondents	Response			
	YES	%	NO	%
MOE/GES Personnel	30	100	0	-
Total	**30**	**100**	**0**	**-**

Source: Compiled from study area

The item was a close–ended one and the respondents, that is, the MOE/GES personnel were to indicate whether the CSSPS was to be continued. From the Table 30, it is noticed that all the GES personnel want the CSSPS to be continued irrespective of the criticisms of the process.

Introduction of new ideas, systems and programmes is often characterized by initial challenges. The problems are addressed as they manifest themselves in the process of trials and actual implementation situations. Due to unforeseen results and problems, new programmes and innovations are often resisted by stakeholders in the related institution or organization, because they are not sure or certain about the progress and the outcomes of the innovations.

Similarly, the CSSPS is characterized by challenges from its implementation era as well as during the study period.

Questionnaires were served on the SHS heads and parents for completion while interview sessions were conducted with the GES/MOE personnel. The item on challenges to the CSSPS was an open-ended item for both the questionnaire and interview schedule. Respondents to the questionnaire were required to list five (5) challenges that militate against the smooth implementation and the function of the CSSPS, while the MOE/GES personnel were made to mention verbally five (5) challenges to the CSSPS's implementation. The information gathered from the responses was classified and synthesized into two (2) categories of systemic and human challenges. The systemic challenges involve errors made in completing registration forms, inadequate information on the schools and sex, error in placement of students in schools not selected and mistakes made by students in the process of selecting schools and programmes. These are basic and fundamental problems hence they are normally associated with the processing of forms. The human factors have to do with attitudes and characters. The information gathered is presented in Tables 31 and 32.

Table 31: Information on Challenges to the CSSPS

Item	Respondent frequency and percentage					
	SHS Heads	(%)	Parents	(%)	Total	
Placement of students in distant schools not selected	8	(21)	14	(13.5)	22	(15.4)
Inadequate information on sex of schools.	4	(10.5)	2	(19.2)	6	(4.3)
Inability of candidates securing their first choice school.	7	(18.4)	10	(9.6)	17	(11.9)
Errors in the selection process by candidates.	2	(5.3)	6	(5.8)	8	(5.6)
Refusal of parents and students to accept alternative placement.	17	(44.7)	72	(69.2)	89	(62.8)
Total	**38**	**(100)**	**104**	**(100)**	**142**	**100**

Source: Compiled from study area

It is evident from Table 31 that, the main factor that militates or constitutes the main challenges to the functioning of the CSSPS is the human factor. The human factor is expressive in terms of the persistent refusal of parents and wards to accept alternative placement into other schools other that the three

popular and endowed schools that they initially selected for placement. Noticeably, it could be seen that 44.7% and 69.2 % of SHS heads and parents respectively identified the human factor as the major impediment in the effective functioning of the CSSPS. Similarly, 62.8% of respondents have collectively identified the human factor as the main element of challenge to the CSSPS.

The problem of the human factor is practically manifested in the preference of parents and their wards to defer placement when they failed to get admission in their selected schools. The basis for the refusal of parents and wards to accept alternative placement is that, the schools in which vacancies still exist are not good and as a result not guarantee good examination results at the West Africa Examination Council (WAEC) final examinations.

Information in Table 32 reinforces the problem of the human factor in terms of refusal to accept placement into alternative schools and therefore preferred to defer the placement.

Table 32: Number of Deferred Placement from 2005 to 2008.

Year	No. Qualified	No. Placed	No. of deferred cases
2005	177,070	151,016	4,000
2006	160,119	145,961	3,031
2007 (UNPLACED)	—	188,880	17,000
2008 (UNSPECIFIED)	173,315	139,478	33,837

Source: Daily Graphic Monday August 17, 2009.

The deferred placements further epitomized the severity of the human factor challenge to the CSSPS. The students and parents prefer to defer their placement than accepting placement into a least endowed school that they did not choose. The first major systemic challenge to the smooth functioning of the CSSPS in terms of magnitude was the placement of candidates in schools far away from the stations of their parents. It constitutes 15.5% of the challenges of the CSSPS. The remote placement of students and the attendant financial commitment involved, caused agitation among parents, hence expressed misgivings about the effectiveness and transparency of the CSSPS process.

The second systemic challenge involved, candidates not getting their programmes of choice and the schools of their first choice. It constituted 11.9% of the challenges to the CSSPS. Another dimension to this challenge involved placement of candidates in private schools instead of public schools. In other cases, candidates were placed in technical schools or vocational schools instead of the normal grammar schools.

The third systemic challenge in terms of magnitude was the errors in the selection process by candidates. It constitutes 5.7% of the challenges of the CSSPS. These errors include candidates selecting one and the same school repeatedly with the hope of acquiring placement in the school at all cost. Again, candidates refused to select schools in their locality though it was a requirement in the selection process. Added to this was mixing up and selecting wrong codes for the schools and regions as well as programmes to be offered in the school.

The mixing of codes of schools and sexes as a result of inadequate information on schools in terms of gender has resulted in male candidates being placed in female schools and vice versa. This however, constituted the least challenge to the smooth operation of the CSSPS.

The identified systemic errors as captured in the CSSPS.

Final reports (2006) were listed as follows:

1. Mistakes in choosing codes.
2. One school with different codes
3. Different schools with the same codes
4. Different index numbers for one student
5. Different first choice schools for the same candidate
6. Candidates with ESSS/TI cards (i.e. missing cards)
7. Wrong entries of ID number on ESSS/TI cards
8. Candidates choosing private schools unknowingly

One of the cardinal reasons for the CSSPS was to reduce enrolment and student population pressure on the so called endowed schools. To this end, candidates as a directive were to choose schools in their localities to ensure a fair spread of student population and density in schools.

For the determination of the extent to which the introduction of the CSSPS has minimized the imbalance in the choice of endowed schools, the three very endowed schools namely, Presbyterian Senior High School, Legon, Achimota Senior High School and Accra Girls Senior High School were selected for examination. Added to the very endowed schools were five endowed schools. The

five endowed schools were sampled and examined with reference to their geographical location so as to avoid schools being clustered together around one place. Based on these criteria the under listed endowed schools were chosen, and trends in their enrolment from 2002 to 2008 were examined to answer Research Question four (4) which states that: How far has the CSSPS minimized the imbalance in the choice of endowed schools?

List of Five Endowed Schools in the Greater Accra Region Selected on the basis of Location

School	Location within the Metropolis and Region
Accra Academy	Kaneshie
Tema Senior High School	Tema
Accra High School	Asylum Down
Labone Senior High School	Labone
Ghanatta Senior High School	Dodowa

The trends in the enrolment data are shown in Table 33.

Table 33: Trends in Enrolment in the Very Endowed and Endowed Schools between 2002 and 2008

School	Before the CSSPS			Total	After the CSSPS			Total
	2002	2003	2004		2005	2006	2007	
PRESEC Boys	410	421	428	1259	400	386	400	1186
Achimota SHS	500	540	522	1572	510	500	520	1530
Accra Girls SHS	380	400	410	1190	380	410	410	1200
Accra Academy	520	500	480	1500	480	490	480	1420
Tema SHS	465	482	421	1368	450	435	435	1310
Accra High School	490	488	390	1368	427	399	470	1296
Labone SHS	410	445	370	1225	410	401	401	1212
Ghanatta SHS	320	325	300	945	322	393	404	932

Source: Compiled from study area

Examination of the enrolment figures within the study period revealed that the enrolment figures and cumulative totals did not change much. The difference in the enrolment figures and totals before and after the introduction of the CSSPS is not very significant. This assertion was tested with the use of the chi-square with the hypothesis that:

Ho: The inception o f the CSSPS has not changed the pattern of choice of endowed schools.

Hi: The inception of the CSSPS has significantly minimized the imbalance in the choice of endowed schools.

The calculated chi-square statistic is χ^2=2.73. The critical value from the statistical table was 14.067.

Since the calculated value of 2.73 is less than the critical table value of 14.067 the null hypothesis was accepted that the inception of the CSSPS has not significantly changed the pattern (i.e. minimized the imbalance) in the choice of the endowed schools. Students still have a strong preference for the very endowed schools.

Finally, the study examined the views of students on their satisfaction with regards to their schools of choice, schools of placement and programmes of study. Table 34 shows the information about students' placement in their schools of choice.

Table 34: Placement of Qualified Students in their Schools of Choice

Item	Response		
	No	%	
Placement of Students in Schools of Choice}	YES	108	80.6
	NO	26	19.4
Total	**134**	**100**	

Source: Compiled from study area

It could be inferred from the information in Table 34 that 80.6% of the qualified students were offered placement in their schools of choice notably their first three schools of choice and preference. On the other hand, 19.4% of the

students were not placed in their schools of choice but rather in other schools where vacancy existed.

Further examination of the percentage figures of 80.6% and 19.4% revealed that the figures were not very close. This was an indication that virtually very often, majority of the students were placed in their schools of choice while only few were placed in schools where vacancies existed based on their aggregate scores, districts and regions of choice.

Table 35: Analysis of Placement of Students in their First, Second and Third Choice Schools

Choice of School	NO	%	
First	35	26.2	
Second	70	52.2	83.6
Third	7	5.2	
None	22	16.4	16.4
Total	134	100	100

Source: Compiled from study area

Information in Table 35 indicated that most of the students secured placement in their second choice schools, this constituted 52.2% of the group. This demonstrates the merit-base selection and placement, as well as the deferred acceptance algorithm characteristics inherent in the CSSPS. The data has also revealed that 26.1% of qualified students had access to placement in their first

choice schools. This was an indication of the high competitiveness for first class and endowed schools. However, only 5.2% of the students had access to their third choice schools which were also first and second choices for other candidates. The information also indicated that 16.4% of the students were placed in schools which did not form part of their choices. The placement of 83.6% of candidates in their first three choice schools virtually correlate positively with information in Table 34 which indicates that 80.6% of the students were placed in their schools of choice. The study further sought for the perceptions (i.e. satisfaction) of the students on their eventual schools of placement and the data on this was set up in Table 36.

Table 36: Satisfaction of Students with their Schools of Placement

Response	No	%
YES	111	82.8
NO	23	17.2
Total	**134**	**100**

Source: Compiled from study area

Despite the numerous complaints about placement of students in the Senior High Schools through the CSSPS, 82.8% of the students indicated that they were satisfied with their placement while 17.2% said that they were not satisfied with their placements. Various reasons were assigned for their satisfaction with their placement. These were analyzed in Table 37.

Table 37: Reason for being satisfied with Schools of Placement

Reason	NO	%
School is good and popular	26	23.4
It was one of my choices	45	40.5
School is good in my programme of choice	11	10
Has good teachers	7	6.3
Because I have secured placement	22	19.8
Total	**111**	**100**

Source: Compiled from SHSs in the Greater Accra Region

From the variety of reasons given for their satisfaction with placement in their schools, the most conspicuous reason was that, the school was one of their schools of choice and preference and it constituted 40.5% of all the reasons given. Additionally, popularity and quality of the school ranked second for their preference for placement. The third reason assigned for being satisfied with placement was the mere chance that they had admission into the senior high school system.

Though the least, but, bothered on academic line of thinking were the reasons of the schools being good and produced good results with reference to their programmes of choice which was subsequently supported by good teachers.

Accompanying the satisfactory state of affairs were areas of dissatisfaction, where students were not satisfied with their schools of placement. The areas of misgiving were examined in Table 38.

Table 38: Reasons for not being satisfied with Placement

Reason	NO	%
It is a Day school	2	8.7
Too far from home	7	30.4
Records poor results	12	52.2
School is too rowdy and undisciplined	2	8.7
Total	**23**	**100**

Source: Compiled from study area

From Table 38, the main reason given by students for being dissatisfied with their placement was due to the schools producing poor results at the West African Examination Council's end of programme assessment examinations, it constituted 52.2% of the reasons why the students were not satisfied with their school of placement. The second point worth noting was the school being far from home; a situation which connotes extra expenditure.

The least prominent reasons for not being satisfied with their schools of placement were that the schools are day institutions and secondly the schools were rowdy and undisciplined.

The study further sought to find out whether the students were offering their preferred courses or programmes irrespective of the schools that they were placed. The responses were represented in Table 39.

Table 39: Are you offering the course of your choice?

Response	NO	%
Yes	118	88.1
No	16	11.9
Total	**134**	**100**

Source: Compiled from study area

It can be inferred from Table 39 that to a large extent, the students who were finally and eventually offered placement in the various Senior High School, Technical/Vocational Institutions were offering their programmes of choice. That is 118 students; constituting 88.1% of sample groups were offering their programmes of choice. However, 16 students, being 11.9% of the group were not offering their programmes of choice.

Finally, the general perceptions of students was sought to find out the extent to which they agreed that the CSSPS has brought fairness into the admission process. The responses to agreements have been shown in Table 40.

Table 40: The CSSPS has brought fairness into the admission process.

Response	No	%
Agree	89	66.4
Disagree	45	33.6
Total	**134**	**100**

Source: Compiled from study area

Information in Table 40 reveal that 89 students out of the total of 134 (i.e. 66.4%) agreed that the CSSPS has brought fairness into the admission process of students into second cycle institutions in Ghana. However, 45 students from the total of 134 (i.e. 33.6%) did not agree with the assertion that the CSSPS has brought fairness into the admission process.

Inference from the whole body of the data analysis and discussion indicated that the agreement on the fairness of the CSSPS's placement was based on the fact that placement was basically on merit that is the student's performance at the BECE was the main determinant for placement. On this basis the heads of institutions had no effective role in the final process of placement, hence issues of bribery and corruption, favouritism and protocol admission were to a large extent eliminated from the placement process.

However, the main source of disagreement on the fairness of the CSSPS was based on the apparent delay in the placement of the subsequent batches of students after the first placement exercise. Other issues of disagreement were

based on students being placed in schools that they did not choose as well as being placed in school distant from their homes or places of residence.

Somuah (2007) noted that, the decision to computerize the selection and placement system of the BECE candidates into SHS came as a result of several problems that bedeviled the manual selection process. It was described as being laborious and caused a lot of anxiety, frustration and confusion, especially for parents of qualified candidates. It was also very susceptible to several problems notably human errors.

The major human errors included the systemic errors as identified and listed in Table 31 on page 103. This consists of items one (1) to four (4) in Table 29. However, those not captured under the systemic errors include:

1. Missing registration cards in transit or at selection centers.
2. Writing index numbers wrongly where nine (9) digit numbers became either eight (8) digit numbers or less.
3. Names and other information provided were not legible hence difficult to read.
4. Incorrect shading of index numbers.
5. Missing or delay in admission letters.
6. Wrong selection of programmes and schools due to wrong code numbers.

Prior to the inception of the CSSPS there were no established mechanisms to check or prevent these errors.

But with the introduction of the CSSPS these human errors have been apparently eliminated or minimized. Hence research question five (RQ5) sought

to evaluate the extent to which, the human errors that plagued the manual system were eliminated and it states:

To what extent has the CSSPS minimized the human errors that characterized the manual system?

In addition to finding out the extent to which the CSSPS has minimized and eliminated the human errors that plagued the manual system, research question five (RQ5) again sought to find out what mechanism and strategies were instituted by the MOE/GES in collaboration with the scheme's managers, the CSSPS secretariat to eliminate the human errors. Each interviewee was to mention two mechanisms / strategies that were adopted to eliminate the errors.

To estimate the extent to which the CSSPS has minimized the human errors associated with the CSSPS, respondents were required to answer yes or no to the question in the interview schedule; the data gathered is represented in Table 41.

Table 41: Extent to which the CSSPS has minimized human errors associated with the manual system.

Respondents	Response				
	Yes	%	No	%	Total
GES / MOE PERSONNEL	26	04	30		
	86.7	13.3	100		

Source: Compiled from study area

Information from Table 41 indicates that the CSSPS has to large extent minimized the incidence of human errors in the selection and placement process of qualified BECE graduates into Senior High Schools. That is 86.7% of GES/MOE personnel respondents who were interviewed affirmed that the CSSPS has significantly minimized the occurrence of human errors in the functioning of the scheme. However, 13.3% of the respondents did not agree that the CSSPS has been purged of the identified human errors.

The mechanisms and strategies that were adopted to minimize the human errors and captured in the responses of the interview are:

1. The introduction of the Scannable Registration Forms.
2. The institution of the Computer Registration. (The Batch Registration)
3. The Categorization of Schools
4. Education and obligation of the Junior High School heads to ensure that the forms were completed correctly
5. Using WAEC Scratch Cards to access results and placement

The use of the Scannable Forms made it possible for the computer to scan for vital information that is required and provided by the candidate on the forms. The institution of the Computer Registration which is technically referred to as the "Batch Registration" ensured that, data or information provided by the candidate was correct; it complemented the Scannable Forms processing. Under the Batch Registration, the computer rejected any male candidate that mistakenly choose a female school and vice versa. Furthermore, the computer rejected candidates who choose a wrong code for a school and programme.

Education, coupled with the obligation of the Junior High School heads was to ensure that, the Scannable Forms were correctly completed by the candidates.

To ensure efficiency and spread of access to Senior High School education as well as reducing, selection and placement time, the Senior High Schools were categorized into groups A.B.C and D as well as T and P. the categorization was based on the availability of facilities, geographical location, subject/programme offered and vacancies available to allow candidates to spread their choice of schools so as to increase their chances of being placed in a school. To the smooth functioning of the categorization process, the Basic Examination registration process and selection of schools were decoupled. (See the categorization of SHS in Appendix A)

The problem of delay in the placement and the phenomenon of missing admission letters in transit were eliminated with the introduction of WAEC Scratch Card for accessing release of result of school placement on the internet. The above discuss mechanisms and strategies incorporated into the CSSPS contributed significantly to the minimization of the human errors that characterized the manual system of selection and placement.

Discussion of Findings

One of the major objectives and reasons for the introduction of the CSSPS was to make education more accessible, thus, expanding enrolment notably in the least endowed Senior High Schools which are under subscribed as compared to the very endowed ones. However, findings of the study indicated that there was

no significant increase in the enrolment of the least endowed schools (LES). Nonetheless, the CSSPS impacted positively on the rural Senior High Schools; a sub-component of the least endowed schools by increasing their enrolment nominally.

One major factor that has been noted to have contributed to the increment is the deferred acceptance algorithm that is inherent in the CSSPS. The low scores of the rural based JHS students and other least endowed students could not guarantee and secure them placement in their preferred and highly competitive endowed schools, hence by the element and principle of deferred acceptance algorithm inherent in the CSSPS, repeated processes of selection, proposal and matching of students eventually placed the low score students in rural schools where vacancies exist to swell up the population of rural Senior High Schools.

This finding resonates with Ajayi (2009) in his description of the workings mechanism of the CSSPS which is merit-based. Ajayi (2009) indicated that, in the working mechanism of the deferred acceptance algorithm which is also inherent in the CSSPS, students are ranked according to their priority levels, that is, their test scores in the case of the CSSPS. Under the deferred acceptance mechanism, there is no penalty in ranking schools in any arbitrary order within the set of first choice schools selected, therefore, if the students are not assigned to any of their preferred and chosen schools the system eventually assigns them to any school where vacancy exist in their district, community or where possible (Ajayi, 2009). This situation must have also informed educational reform developers and initiators to recommend the establishment of community schools

which are mostly rural in nature and also to reserve quota allocation for students within the community or catchment area.

The community school system is also in consonance with the multi-track system in Taiwan where students were encouraged to attend schools in their community that are located near their homes where they are encouraged to stay in a less competitive environment. This was encouraged and suggested in favour of attending "star schools."

The essence of every new system or innovation and its subsequent acceptance and diffusion is to improve upon the functioning of a previous or existing system to meet the demands of society. The introduction of the CSSPS sought to improve upon the processes and functioning of the manual system in terms of accelerating the role of selection and placement of students relative to the manual system. The manual system was very slow and characterized by delay in the selection and placement of students.

Results from the present study indicate that, the innovation and introduction of the CSSPS has significantly reduced the delay and the subjective nature in the selection and placement of qualified candidates into their respective schools especially the first batch of students. This achievement is consistent with the practice of the selection and placement system of Turkey which went through several eras of restructuring, refining and innovation with the purpose of achieving the objective of fairness in an economical manner while meeting the necessary deadlines.

Similarly Olave, Rajkovic & Bohanec (1989) noted that the DECMAK expert system of selection and placement worked perfectly and explicitly by reducing the dependence on subjective valuation. It reduced the time of deliberations and allowed quick explanation without ambiguity in the results of the admission process, consistency in decision making was higher and as a consequence, the number of conflict situations between parents and school authorities in respect to selection and placement reduced. The CSSPS operates on similar lines. It has reduced the period of selection and placements since all the operations are carried at a central point that is the CSSPS Secretariat.

It has greatly reduced the "subjectiveness" of selection and placement since all process are automated and computerized. The headmasters no longer scan through the cards to look for preferred candidates and scores. The CSSPS has also greatly reduced the contacts between parents and SHS heads prior, during and after the selection process as did the DECMAK expert system in Yugoslavia. The procedure of selection and placement is easily explained and defended. The Junior Graphic Editorial of Wednesday November 19th 2008 (pp. 12 – 25) reported that the GES has placed 98% of qualified students in the first batch of placement and this indicates rapid placement process.

Another demonstrative evidence of the minimization in the delay in placement is the use of WAEC's scratch cards to check results and school of placement on the internet. This is a practical replacement of the former manual era where students will have to wait for the results to be released to the District Education Offices before being dispatched to the respective J.H.Ss. This process

has also eliminated the obsolete practice of waiting for admission letters which take a long time to get to the recipient students. Some admission letters never reached their destination thus making the student concerned lose his/her place to other less qualified students.

The study also examined the perception of stakeholders on the CSSPS. Though the CSSPS nominally increased the enrolment of the rural SHSs and also significantly reduced the human subjective practices as well as reducing the delay in the selection and placement of qualified candidates, it was not without problems and criticism. These were expressed in the perception of the public about CSSPS. There was advocation for its abolition based on the fact that:

1. It places students far away from their parents and also placed students in schools they did not choose hence some parents and wards refused to accept placements.
2. Furthermore, the CSSPS placement system was deemed to be manipulated by the officials of the Secretariat

The manipulation of the CSSPS perception was contrary to the reality and working mechanism of the CSSPS, hence, Bonney (2009) refuted this erroneous perception by stating that, the selection and placement as well as the matching of scores is done through automation by computers without human interference. Hence, the electronic mode of selection and placement may not easily be manipulated.

Another reason for the discontinuation of the CSSPS was the difficulty of rural students accessing placement in endowed schools hence being denied quality education.

Despite the misgivings about the CSSPS, the study found out that majority of stakeholders support the application of the CSSPS as the main tool for selection and placement of students into the SHS educational stream. The major points that underpin the use of the CSSPS as the main mechanism for selection and placement is its merit-base attribute of selection and placement.

The CSSPS is a merit-based selection mechanism that selects and places students into their respective selected and preferred schools based on merit in terms of their scores at the B.E.C.E. The merit-base, systems or models were applied in Guyana, (Bacchus 1966).

He noted that the selection and placement procedure had a strong academic element which was evident in the allocation of students with the highest scores to the top elite schools. Similarly the disbanded "Joint Examination" in Taiwan was a merit-based system. The merit-based placement is often a preferred mechanism for selection and placement when the intention is for maximizing educational attainment (Duflo, Dupas & Kremer 2008).

Duflo et al (2008) found that merit-based selection and placement system are beneficial to the extent that, the potential of attending a good quality and well endowed school provides the students with the initiative for strong academic performance prior to the secondary school and the prospect of qualifications and

promotion to tertiary education and this provides incentives for sustained academic performance through secondary education.

This point of view motivated the support for the continued use of the CSSPS as the main selection and placement tool.

These academic factors and reasons justify the introduction of the CSSPS as a relevant selection and placement tool.

On the moral and social front, the study's justification of the CSSPS was on the basis that, it has reduced misdemeanor behaviour such as bribery and corruption by the heads of the SHSs.

Despite the merit attribute of the merit-based placement systems and models such as the Joint Examinations and CSSPS, they are associated with some problems. They are often determined through testing. However, test performance is often determined by factors other than ability. In particular, test scores may be affected by the socio-economic background of the student. – (Duflo, Dupas & Kremer, 2008; Neil & Medina 1989).

Duflo, et al (2008) noted that merit-based policies disadvantage students from low socio-economic backgrounds and minority groups. Similarly, Neil & Medina (1989) also indicated that 1Q tests are biased against students with certain backgrounds and experiences.

These factors could have contributed to the nominal increase in the enrolment of the rural SHS in the study area since rural areas are characterized by a low socio-economic status populace which invariably affects the academic

performance of most rural school going children. Their low B.E.C.E. scores therefore resign them to the least endowed, rural and community schools.

Bacchus (1966) also studied the SSEE selection and placement system in Guyana and established a relationship between the socio-economic status of (SES) parents and performance of students at the SSEE. He concluded that, children of parents with high socio-economic background performed excellently at the SSEE as compared to those of low socio-economic parentage. The implications of this phenomenon are that children from parents with high socio-economic status attend SHSs in relatively greater numbers and also gain admission to endowed schools than those of low socio-economic parentage. The CSSPS endeavour to address the socio-economic inequality; Ajayi (2009) noted that, many schools have been evaluated and assigned deprivation scores ranging from 0 – 9. Zero (0) implied non-deprived and nine (9) imply highly deprived.

These ranges of deprivation scores are used to scale up test scores from low-resourced JHSs and the rural students in an attempt to compensate for the disadvantage under resourced schools.

The scaling up of rural and deprived JHS students results is also in consonance with the recommendation of Addae-Mensah et al (1973) that Common Entrance scores of endowed private/international school students and those of public schools should be normalized using Ogives to enable the rural and public school students to have equal access to endowed SHSs.

It is therefore obvious that successive attempts at improving the mechanism of selection and placement into SHSs are to enhance efficiency and to increase access to secondary education.

Human established institutions and designed models are often characterized by challenges in their formative and initial application stages, however, these are perfected through interventions and refinement as the challenges are identified and addressed. Similarly the CSSPS was also bedeviled with its own challenges together with those inherited from the manual system thus; the computerization of the selection and placement of B.E.C.E. candidates into SHSs was due to the numerous challenges that bedeviled the manual system (Somuah 2006). The manual system was described as being laborious tedious and frustrating. This was coupled with several human errors such as incorrect writing and shading of index numbers and codes, as well as wrong selection of academic programmes. Some students selected programmes that were not offered in their selected schools and until the inception of the CSSPS there was no effective mechanism to address these problems which were mechanical in nature. However, the study findings have indicated that, the CSSPS has to a great extent minimized the human errors which are also termed systemic challenges. This was achieved through the adoption of effective and pragmatic strategies and mechanisms such as the introduction of Scannable Forms, Computer Registration (i.e. Batch Registration) and WAEC's insistence that JHS heads ensure that the registration forms were completed correctly. The penalty

for non-compliance with these requirements resulted in computer rejection of faulty and flaw laden completed cards.

The punitive measures obliged both the candidates and the heads of JHSs to strictly comply with the requirements of completing the Scannable Forms. (i.e. Registration Forms). By these mechanisms the human (i.e. systemic challenges) errors were drastically minimized and eventually eliminated.

The second challenge that plagues the effective functioning of the CSSPS was the human factor. The human factor challenge manifested in behavioural and attitudinal terms. It was demonstrated in the refusal of parents and their wards to accept placement in other schools except those of their preferred choice. This challenge is not mechanical or computer related; it is character manifestation. Parents prefer to defer placement than accepting placement to any school which was initially not one of their choices.

The study therefore revealed that the main challenge that militates against the CSSPS is the human factor. This challenge was so disturbing that, Quansah (2008 p.3) appealed through the Junior Graphic that parents should accept placement in schools their wards did not select.

Human nature is such that people gravitate towards good and already established things. This phenomenon is demonstrated in the choice of endowed SHSs by students. Places in endowed SHSs such as Achimota, Accra Girls and Presbyterian Boys SHSs are oversubscribed, while the least endowed schools receive less preference in terms of choice by students. The CSSPS sought to achieve a redistribution and balance in the placement of students in SHS.

However, findings from the study show that the CSSPS was not able to eliminate the preference and pressure on the endowed schools. Students still have a strong preference for endowed schools.

Pressure and preference for endowed and prestigious schools is not limited to Ghanaian parents' and wards; the Taiwan MOE stated in its introduction of the "multi-track system" to replace the "Joint Examination". Here, there was no shortage of schools to attend rather, pressure on students from parents who want their children to attend "first class star" schools under the notion that it equates diplomas from these institutions with money and success hence the cause of pressure of population on the first class schools.

With the elimination of human errors in the selection and placement process by the CSSPS, it can also be used in combination with other placement systems such as the "Random Placement System" to achieve a fair distribution of students thus minimizing the preference and pressure on the endowed schools. The Random Placement System involves automated computerized allocation of lottery numbers to students in a randomly generated order and to assign students to schools. This has been a preferred approach in assigning choice of schools and programmes in U.S.A. schools (Ajayi, 2009). The random placement system is used to achieve a balanced mixed of characteristics such as intellectual and sportsmanship across schools. This will minimize the phenomenon of placing by merit high achievers in already well endowed and first class schools to the disadvantage of the least endowed schools. This arrangement will to some extent minimize the human factor challenge to the smooth functioning of the

CSSPS and the pressure and preference for endowed schools in the study area and Ghana.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This concluding chapter presents the summary to the study, together with the conclusions and recommendations.

Overview of the Research Problem and Methodology

The study sought to examine and evaluate the functioning and effectiveness of the CSSPS as a tool of selection and placement of qualified students in second cycle institutions as against the original manual system. Specifically it sought to examine the perceptions of stakeholders on the CSSPS as an effective replacement for the manual system of selection and placement.

The following research questions were used to give focus and direction to the study.

1aWhat has been the effect of the CSSPS on enrolment in the least endowed schools?

1b.What factors are likely to increase the enrolment of rural schools?

2. To what extent has the institution of the CSSPS provided quick placement of students in Senior High Schools?

3. What are the perceptions of the major stakeholders of the CSSPS?

4. How far has the CSSPS minimized the imbalances in the choice of

endowed schools?

5. To what extent has the CSSPS minimized the human errors that characterized the manual system?

The methodology described the frame on which the study was organized. The descriptive survey design was adopted for the research work. A sample size of three hundred and six (306) subjects was selected for the study using stratified sampling and simple random sampling (lottery system) procedures. The above sampling procedures were used to limit biases in the selection as well as making the sample representative of the population under study. Furthermore, they provide equal chance to every subject to be represented in the sample. Questionnaire and interview techniques were employed as research instruments to collect information and also to generate data for the study.

The data generated was processed and converted into percentages to facilitate the discussion process. The data was presented for analysis in tabular form.

Findings

1a. Enrolment in the least endowed schools did not increase significantly with the inception of the CSSPS.

b. (i). The CSSPS favoured the rural schools by increasing their enrolment nominally. This is indicative of the 63.37% respondents who held this view.

2a. (ii) Limitation of preferential treatment from Heads of Senior High Schools to less qualified candidates helped to swell up enrolment in rural schools

because brilliant rural students with low scores have to remain in the rural schools.

2b. (iii) The merit-based deferred placement nature of the CSSPS eventually placed low –score students in the rural schools to nominally increase their enrolment.

c (i) The CSSPS has greatly minimized the phenomenon of delay in placement; 75%, 77.4% and 80% of parents, SHS Heads and GES/MOE personnel respectively agreed to this assertion.

3. (a) The CSSPS was able to place about 80.6% of qualified students in their schools of choice, while the remaining qualified students were placed in schools where vacancies existed with reference to their aggregate scores, districts and regions of choice during the first run of placement.

(b) Parents, as one of the major stakeholders in the CSSPS initiative suggested that the CSSPS should be discontinued for two main reasons notably; the difficulty in replacing missing cards and names and the difficulty of rural students accessing placement in endowed schools. Both reasons accounted for 73.5% of the reasons given for such an action.

4. (a) Heads of SHS and GES/MOE personnel played down the issues of corruption and the manipulation of the CSSPS by government officials and the rich as reasons for discontinuing the operation of the CSSPS as

5.(a) Stakeholders agreed that the CSSPS gives the true picture of student performance hence a better tool for selection and placement of students in SHSs and it also makes selection easy.

(b) Parents supported the continuation of the CSSPS, based on the views that it has minimized corruption and eliminated preferential treatment and favouritism.

c Pressure on the choice/selection of endowed schools did not minimize with the inception of the CSSPS.

d. (i) Challenges to the CSSPS were categorized into two groups, namely systemic errors and human factors. Systemic errors relate to human fallibility while the human factor challenge relates to human behaviour, that is, refusal of parents and their wards to accept placement to less endowed schools and any other school except those originally selected for placement. The human factor was identified as the major challenge to the CSSPS.

5.(a) The CSSPS has greatly minimized the human errors that characterized the manual system of selection and placement of qualified students into SHSs but the human factor continuous to be the major challenge to the smooth running of the CSSPS.

(b) There was consensus that to a large extent, the CSSPS has brought a degree of fairness into the placement of qualified students as against the manual system.

Conclusions

On the strength of the finding as summarized, the following conclusions are drawn. The CSSPS has not impacted positively and significantly in increasing the enrolment of the least endowed schools. The situation exist because the infrastructural, teaching and input conditions of the least endowed schools have not been improved alongside the inception of the CSSPS to serve as an attracting factor for students to shift from clamouring for the endowed schools for the less popular ones.

Though the CSSPS has not to a large extent increased the enrolment of the least endowed schools, it has nominally increased the enrolment of the rural schools. Selection and placement on merit by the CSSPS has restricted average and brilliant rural students with low BECE scores to their local and community schools to marginally swell-up student population in the rural schools since most bribery and favouritism channels to endowed schools have been minimized.

The undue delay in selection and placement of qualified students that characterized the manual selection and placement system was partly minimized with the inception of the CSSPS, at least, with the placement of the first batch of qualified students. However, subsequent placements from mob up exercises are still plagued with the delay syndrome.

On the whole, the CSSPS has to large extent minimized the problems that characterized the manual system, hence; on this premise the CSSPS is a better alternative to the manual system as a tool for selection and placement of qualified students into SHS, Technical and Vocational institutions.

The inception of the CSSPS has not changed the pattern of preference and imbalance in the choice of endowed schools as first, second and third choices for placement. Stakeholders' holistic perception of the CSSPS was that it has eliminated misdemeanor behaviour of favouritism, bribery, corruption and frustration by SHS Heads. Majority of parents and students hold this view. On the part of the SHS Heads and GES/MOE personnel, the CSSPS has brought fairness in the selection and placement process which is purely based on merit.

The systemic and human errors that were associated with the manual system and the initial stages of the implementation of the CSSPS have been greatly minimized based on the repeated refining of the CSSPS over the study period of the system's operation.

A daunting challenge that militates against the effective functioning of the CSSPS is the human factor in terms of behaviour. This was related to students and parents' persistent refusal to accept placement to least endowed schools even in cases where students personally selected the schools for placement.

Recommendations

1. It is recommended that the Ministry of Education (MOE) and Ghana Education Service (GES) should provide inputs in time to the least

endowed schools and also upgrade the infrastructural facilities in the least endowed schools to make them attractive to students so as to reduce pressure on the endowed schools.

2. Incentive packages should be instituted by the Ministry of Education and the Ghana Education Service for teachers who teach in the least endowed schools especially the rural community Senior High Schools (SHSs) so as to work selflessly to produce results to entice students to such schools.
3. Students and parents should be conscientised by Junior High Schools (JHSs) Heads, Religious Leaders and personnel from the Computerized School Selection and Placement System (CSSPS) secretariat to accept placement into least endowed schools with the encouragement that buildings do not produce results. Performance depends on the efforts put in learning by students themselves.

Recommendation for Further Studies

Further research should focus on the evaluation of the CSSPS after five years of its operation to find out its effectiveness nationwide.

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APPENDICES

APPENDIX A

CLASSIFICATION OF SENIOR HIGH AND TECHNICAL SCHOOLS IN THE GREATER ACCRA REGION

VERY ENDOWED

1. PRESBY BOYS SECONDARY SCHOOL, LEGON
2. ACHIMOTA SENIOR HIGH SCHOOL
3. ACCRA GIRLS SENIOR HIGH SCHOOL

ENDOWED

1. ACCRA ACADEMY
2 ST. JOHNS GRAMMAR ACHIMOTA
3 WESLEY GRAMMAR SENIOR HIGH SCHOOL
4. ACCRA HIGH SCHOOL
5. TEMA SENIOR HIGH SCHOOL
6. ST. MARY'S SENIOR HIGH SCHOOL
7. LABONE SENIOR HIGH SCHOOL
8. ODOGONOR SENIOR HIGH SCHOOL
9. ST. THOMAS AQUINAS SENIOR HIGH SCHOOL
10. WEST AFRICAN SENIOR HIGH SCHOOL
11. EBENEZER SENIOR HIGH SCHOOL
13. KINBU SENIOR HIGH TECHNICAL SCHOOL
14. GHANATTA SENIOR HIGH SCHOOL

FAIRLY ENDOWED

1. HOLY TRINITY SENIOR HIGH SCHOOL
2. CHRISTIAN MEHODIST SENIOR HIGH SCHOOL
3. KENESHIE SECONDARY/TECHNICAL SCHOOL
4. CHEMU SENIOR HIGH SCHOOL
5. PRESBY SENIOR HIGH SCHOOL, OSU
6. ARMED FORCES SENIOR HIGH SCHOOL
7. OUR LADY OF MERCY SENIOR HIGH SCHOOL– TEMA
8. PRESBY SENIOR HIGH SCHOOL – TEMA
9. TEMA METHODIST SENIOR HIGH SCHOOL
10. ST. MARGARET MARY SECONDARY / TECHNICAL

LEAST ENDOWED

1. ADA SECONDARY/TECHNICAL SCHOOL
2. AMASAMAN SENIOR HIGH SCHOOL
3. MANHEAN SENIOR HIGH SCHOOL
4. NINGO SENIOR HIGH SCHOOL
5. OSUDOKU SENIOR HIGH SCHOOL
6. NGLESHI AMAFRO SENIOR HIGH SCHOOL
7. PRESBY SENIOR HIGH SCHOOL – TESHIE
8. ORIELLY SENIOR HIGH SCHOOL
9. NUNGUA SENIOR HIGH SCHOOL
10. PRESBY SENIOR HIGH SCHOOL – LA
11. ASHAIMAN SENIOR HIGH SCHOOL

APPENDIX B

UNIVERSITY OF CAPE COAST

INSTITUTE FOR EDUCATIONAL PLANNING

AND ADMINISTRATION

STAKEHOLDERS' PERCEPTION OF THE COMPUTERIZED SCHOOL SELECTION AND PLACEMENT SYSTEM: A STUDY OF THE GREATER ACCRA REGION, GHANA.

QUESTIONNAIRE FOR HEADS OF SENIOR HIGH INSTITUTIONS

Dear Sir / Madam,

I am conducting a study on the above topic and would be glad to have you participate in it. Please kindly answer the following questions concisely as possible. Any information you provide will be considered confidential.

Please tick (√) your choice among the alternative responses to the items. Where there are no such alternatives, kindly provide your own responses in the space provided.

Thank you.

Please tick (√) where applicable

Section A: Demographic Data

1. Gender: Male ☐

Female ☐

2. Age: 35 – 39yrs ☐

40 – 44yrs ☐

45 – 49yrs ☐

☐

50 – 54yrs

55 – 60yrs ☐

3. Rank in G.E.S:

Superintendent II ☐

Superintendent I ☐

Senior Superintendent I ☐

Principal Superintendent ☐

Assistant Director II ☐

Assistant Director I ☐

Deputy Director ☐

Section B: Information on Senior High Schools (SHS)

1. Is your school listed in the West Africa Examination Council (WAEC) Register?

Yes ☐ No ☐

2. What is the location of your school? 1. Urban ☐

2. Semi – urban ☐

3. Rural/community ☐

3. Programmes Offered in SHS

Purely Secondary ☐

Secondary / Commercial ☐

Secondary Technical ☐

Secondary / Vocational ☐

4. How endowed is your school in terms of infrastructure and teaching resources?

i. Very Endowed ☐

ii. Endowed ☐

iii. Fairly Endowed ☐

iv. Least Endowed ☐

5. Which of these views about CSSPS is true in your view?

i. Increased enrolment ☐

ii. Decreased enrolment ☐

iii. Stabilized enrolment ☐

6. Comment on the option ticked above.

……

……

.....

7. List two benefits that the introduction of CSSPS has brought to your school.

i……

……..

ii……

…….

8. List three challenges facing the implementation of the CSSPS to your school.

i……

……

ii……

……

iii……

……..

9. What suggestions do you have for improving CSSPS?

i……

……..

ii……

……

Section C: Perception of SHS Heads on the CSSPS

Item	Statement	Response				
		Strongly Agree	Agree	Undecided	Strongly Disagree	Disagree
10	CSSPS has greatly reduced frustration of parents.					
11	CSSPS has reduced the manual fatigue on school heads with					

	regards to admission.					
12	CSSPS has reduced the pressure of admission on school heads from Government officials and Old boys					
13	CSSPS has improved enrolment in my school.					
14	CSSPS has increased pressure on school infrastructure.					
15	CSSPS has made my school more					

	popular.					
16	The CSSPS has minimized delay in the placement.					
17	The CSSPS has minimized human errors associated with the manual system: (i) Biases in selection.					
	(ii) Missing of admission cards					
	(iii) Delay in admission letters.					
	(iv) Missing of admission letters.					
	(v) Wrong					

	choice of programmes					
	(vi) Wrong spelling of names.					
	(vii) Unconsciously jumping the cards of good students.					

Please offer your perceptions by ticking (√) your response that closely describes your views. Try to respond to each statement.

APPENDIX C

UNIVERSITY OF CAPE COAST

INSTITUTE FOR EDUCATIONAL PLANNING

AND ADMINISTRATION

STAKEHOLDERS' PERCEPTION OF THE COMPUTERIZED SCHOOL SELECTION AND PLACEMENT SYSTEM: A STUDY OF THE GREATER ACCRA REGION, GHANA.

QUESTIONNAIRE FOR STUDENTS

Dear Sir/Madam,

I am conducting a study on the above topic and would be glad to have you participate in it. Please kindly answer the following questions as concisely as possible. Any information you provide will be considered confidential. Section A deals with the demographic and socio-economic background of respondents. Section B deals with the other questionnaire items.

Please tick (√) your choice among the alternative responses to the items. Where there are no such alternatives kindly provide your own responses in the space provided.

Thank you.

Instruction: Please read carefully and tick [√]

1. The Computer placed you in a school of your choice?

   Yes ☐ No ☐

2. If you responded 'yes' to question 1 above, in which choice of school were you placed?

   a. First [ ] b. Second [ ] c. Third [ ]

3. If you responded 'no' to question 1 above were you placed in a school of your chosen district?

   Yes ☐ No ☐

4. Are you happy about the school in which you have been placed?

   Yes ☐ No ☐

5. If you responded 'yes' to question 4 above, why?

……

……..

6. If you responded 'no' to question 4 above, why?

……

……..

7. Are you offering a course of your choice?

   Yes ☐ No ☐

8. Was your preferred course changed by the school?

   Yes ☐ No ☐

9. Is it preferable to fill admission forms for placement after the release of the Basic Education Certificate Examination results (BECE)?

   Yes ☐ No ☐

10. Comment on the option ticked above.

……

……

11. Was the operation of the computerized scheme fully explained to students in your school? ☐ ☐

Yes No

12. Do you understand how the CSSPS operates?

Yes ☐ No ☐

13. The computerized scheme has brought fairness in the admission process?

Strongly Disagree ☐

Disagree ☐

Agree ☐

Strongly Agree ☐

14. Comment on the option ticked above.

……

……

15. Would you suggest a replacement of the Computerized School Selection Placement System (CSSPS) or not? Give two reasons.

……

……

……

16. Has the CSSPS minimized delay in placement?

Yes ☐ No ☐

17. If you responded ‘yes’ to the question 16 above, explain.

……

……

……..…….

18. If you responded ‘no’ to the question 16 above, explain.

……..

……

Section C: Perception of SHS Students on the CSSPS

Item	Statement	Response				
		Strongly Agree	Agree	Undecided	Strongly Disagree	Disagree
A	CSSPS has greatly reduced frustration of parents.					
B	CSSPS has reduced the manual fatigue on school heads with					

	regards to admission.					
C	CSSPS has reduced the pressure of admission on school heads from Government officials and Old boys					
D	CSSPS has improved enrolment in my school.					
E	CSSPS has increased pressure on school infrastructure.					
F	CSSPS has made my school more					

	popular.					
G	The CSSPS has minimized delay in the placement.					
H	The CSSPS has minimized human errors associated with the manual system: (i) Biases in selection.					
	(ii) Missing of admission cards					
	(iii) Delay in admission letters.					
	(iv) Missing of admission letters.					
	(v) Wrong					

	choice of programmes					
	(vi) Wrong spelling of names.					
	(vii) Unconsciously jumping the cards of good students.					

19. Please offer your perceptions by ticking (√) your response that closely describes your views. Try to respond to each statement.

APPENDIX D

UNIVERSITY OF CAPE COAST

INSTITUTE FOR EDUCATIONAL PLANNING AND ADMINISTRATION

STAKEHOLDERS' PERCEPTION OF THE COMPUTERIZED SCHOOL SELECTION AND PLACEMENT SYSTEM: A STUDY OF THE GREATER ACCRA REGION, GHANA.

QUESTIONNAIRE FOR PARENTS / GUARDIANS AND OPINION LEADERS

Dear Sir / Madam,

I am conducting a study on the above topic and would be glad to have you participate in it. Please kindly answer the following questions concisely as possible. Any information you provide will be considered confidential.

Please tick (√) your choice among the alternative responses to the items. Where there are no such alternatives, kindly provide your own responses in the space provided.

Thank you.

Please Tick (√) Where Applicable

Section A: DEMOGRAPHIC DATA

1. Gender Male: ☐ Female: ☐

2. Age 20 – 25yrs ☐

26 – 30yrs ☐

31 – 35yrs ☐

36 – 40yrs ☐

☐

41 – 45yrs

65^{+} yrs ☐

3. Relationship to Student:

Father ☐

Mother ☐

Guardian ☐

4. Occupation:

Civil Service ☐

Public Service ☐

Self Employed ☐

Section B: Perceptions of Parents, Guardians and Opinion Leaders

1. Do you have a child/ward that was placed in the senior high school through the CSSPS? ☐ Yes ☐ No

2. If yes which of the following was true of your child /ward's placement?

Tick where applicable.

1st school of choice ☐

2^{nd} school of choice ☐

3^{rd} school of choice ☐

Got the programme of choice ☐

Could not get the programme of choice ☐

3. Should the manual and the CSSPS operate side by side?

Yes ☐ No ☐

4. Give two reasons why both the manual and computerized system should operate at the same time.

i.……

…….

ii.……

……

5. Do you think the CSSPS favours the rural schools?

Yes ☐ No ☐

6. State one reason for your answer.

……

……..

7. State two reasons why the computerized system of placement should be continued.

i.……

…….

ii.……

……..

8. State three reasons why the computerized system should be stopped

i.……

…….

ii.……

…….

iii……

……

9. What are some of the challenges facing the CSSPS?

……

…..……

……

……

Section C: Perception of Parents/Guardians and Opinion Leaders of the Computerized School Selection and Placement System (CSSPS)

Please offer your perceptions by ticking your response that closely describes your views.

Try to respond to each statement.

Item	Statement	Response				
		Strongly agree	Agree	Undecided	Strongly Disagree	Disagree
10	The computerized system of selection and placement has gently solved the problem that characterized the					

	manual placement of students into the senior high school					
11	Many students could not have obtained schools if the CSSPS had not been introduced to replace the manual selection					
12	The CSSPS has increased the worry of parents because school of placements are far away from home					
13	The CSSPS cannot be manipulated by					

	rich parents					
14	The CSSPS cannot be manipulated by top officials					
15	With the CSSPS brilliant students from rural and less endowed basic schools still find it difficult to enter the top schools in the country					
16	The CSSPS has minimized delay in placement					
17	The CSSPS has minimized human errors associated with the manual system					

	i. Biases in selection ii. Jumped the card of good students iii. Delay in admission letters iv. Missing of admission letters v. Wrong choice of programme vi. Missing of admission cards vii. Wrong spelling of names					

APPENDIX E

UNIVERSITY OF CAPE COAST

INSTITUTE FOR EDUCATIONAL PLANNING

AND ADMINISTRATION

STAKEHOLDERS' PERCEPTION OF THE COMPUTERIZED SCHOOL SELECTION AND PLACEMENT SYSTEM: A STUDY OF THE GREATER ACCRA REGION, GHANA.

INTERVIEW SCHEDULES FOR MOE / GES PERSONNEL

Dear Sir / Madam,

I am conducting a study on the above topic and would be glad to have you participate in it. Please kindly answer the following questions concisely as possible. Any information you provide will be considered confidential.

Thank you.

Section A: Perception of MOE/GES Personnel of CSSPS.

1. Do you think the Computerized School Selection and Placement System (CSSPS) have completely solved the problems associated with the manual system?

Response……

……

…….

2. In your view, do both the endowed and less endowed schools equally benefit from the distribution of brilliant candidates under the CSSPS?

Response……

……

……

3. Is it likely that, parents would have preferred a combination of both the manual and the computerized system?

Response……

……

……

4. In your opinion, has the CSSPS greatly promoted efficiency, transparency integrity and cost effectiveness of the selection and placement process?

Response……

……

……..

5. Do you agree to the assertion that, Personnel of the CSSPS secretariat are usually influenced by rich and influential parents and school heads in the selection and placement exercise?

Response……

……

……..

6. In your opinion, why do you think some parents still complain about the new system of selection and placement?.....

……

7. In your opinion, do you agree that the CSSPS has reduced preference for the choice of endowed schools?

Response……

……

……..

8. In your opinion has the CSSPS minimized delay in Senior High Schools Admission?

Response……

……

…….

9. Do you still experience these human errors associated with the manual system?

i. Missing admission/application cards……..

ii. Missing admission letters……

iii. Delays in admission letters……

iv. Biases in selection and placement ……..

10. Mention two ways through which the human and other errors were eliminate from the CSSPS by the Scheme's managers.

i.……

……

……..

ii.……

……

…….

Section C: Please offer your opinion by saying SA, A, UD, SD and D to items that I will read out.

Item	Statement	Response				
		Strongly agree	Agree	Undecided	Strongly Disagree	Disagree
11	The computerized system of selection and placement has gently solved the problem that characterized the manual placement of students into the senior high school					
12	Many students could not have					

	obtained schools if the CSSPS had not been introduced to replace the manual selection					
13	The CSSPS has increased the worry of Parents because school of placements are far away from home					
14	The CSSPS cannot be manipulated by rich parents					
16	The CSSPS cannot be manipulated by top officials					

17	With the CSSPS brilliant students from rural and less endowed basic schools still find it difficult to enter the top schools in the country					
18	The CSSPS has minimized delay in placement					
19	The CSSPS has minimized human errors associated with the manual system viii. Biases in selection ix. Jumped the					

	cards of good students x. Delay in admission letters xi. Missing of admission letters xii. Wrong choice of programme xiii. Missing of admission cards xiv. Wrong spelling of names					

APPENDIX F

Determination of Accessible Population

The total enrolment for the 38 government assisted schools in the Greater Accra Region 17,592

Average population of each school = $\frac{17,592}{38}$

= 463

Accessible population is therefore.

Students	463	
Parents	463	
S.H.S. Heads	38	
GES/MOE Personnel	30	
Total		994

Hence = Sample Size

31% of 994 = 306

APPENDIX G

Allocation of Population Components to sample

Students 29% of 306 = 134

Parents 22.5% of 306 = 104

SHS Heads Fixed = 38

GES/MOE Personnel from Four Districts / Metropolitan Assemblies

Accra Metropolitan Area (AMA)	12
Tema Metropolitan Area (TMA)	08
Dangme West	05
Dangme East	05
Total	306