UNIVERSITY OF CAPE COAST

AN ASSESSMENT ON MANAGEMENT OF INSTRUCTIONAL TIME IN PUBLIC JUNIOR HIGH SCHOOLS IN THE MAMPONG MUNICIPALITY IN THE ASHANTI REGION

BY

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DECLARATION

Candidate's Declaration

I hereby declare that this dissertation 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.

Candidate's Signature: …… Date: ……

Name: Margaret Afranewaa Appiah

Supervisor's Declaration

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

Supervisor's Signature: …… Date: ……..

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ABSTRACT

Effective instructional time management is crucial in the running of schools. With this in view, an assessment was conducted into the instructional time management of public Junior High Schools in the Mampong Municipality. A sample of 235 respondents made up of 207 teachers and 28 headteachers was used. Three instruments, including a self-administered questionnaire, observation and interview guides were used for data collection. The instruments were pilot tested on 13 headteachers and 90 teachers who did not take part in the main data collection process. Data from both the pilot test and main data administration were analysed manually and electronically, in which the electronic analysis was done with the help of the Statistical Products and Service Solutions (SPSS) version 12.0. Presentation of results was done mainly through frequency tables and percentages.

Results of the study indicated that the minimum teaching period per week was 24 hours and the maximum was 36. It was also found that every JHS officially started lessons from 7.30 am and ended at 1.40pm, this meant there were eight hours instructional time for use. Again, the results revealed that preparation and vetting of lesson notes constituted a major component of the instructional time management. Some challenges to instructional time usage were uncovered and they included the fact that most teachers did not respond promptly to bells, managing classes of absentee teachers, supervision of teachers during free periods and during teaching. Appropriate recommendations were made particularly to headteachers to step up their supervisory duties.

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DEDICATION

This work is dedicated to my children, Theophilus, Theodora and Freda.

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CHAPTER ONE

INTRODUCTION

Background of the Study

A school, like any other organization, has got its goals and objectives. The primary objective of every school is to provide quality education to individuals to be accepted and be of use to the parents, the community and the country as a whole. For any country to develop its human resource base to formidable state, that country should put in place the necessary structures that would enable it to develop its human resource. Schools are built so that the requisite academic skills and artistic training will be given to individuals. It is against this background that the Ministry of Education through the Ghana Education Service has ensured that the heads of schools, teachers and pupils make good use of instructional time so as to achieve this aim.

In Ghana, the Junior High School concept, which is a vital component of the educational reforms, was experimented from 1978 to 1986 in some selected schools across the country. The full implementation took off in 1987 and was to develop all the three domains being: the psychomotor, the affective and the cognitive domains through vocational, technical and intellectual abilities. A major factor for its implementation was to reduce the years spent in school from 17 years (six years primary school, four years middle school, five years

secondary and two years sixth form) to 12 years (six years primary school, three years junior high school and three years senior high schools were of the view that the reduction in years was a major setback in education.

To make up for the loss, an effective management of the instructional time has to be adopted. Conscious effort has to be made by the headteachers, teachers and the pupils to make use of time judiciously. There is a three-year duration for Junior High School which leads to the certification of the Junior High School at the end of the third year by students taking the Basic Education Certificate Examination (BECE).

Junior High School (JHS) has specific instructional time to follow. The timetable is structured in such a way that the session begins at 7.30 am and ends at 2.00 pm each school day. Each period covers 35 minutes and there are nine periods a day. Within the regulation time, provisions have been made to cater for assembly, registration and break periods.

According to the Ghana Education Service (GES) Regulations (2006), a single stream JHS with just three classes should have a maximum of five teachers which should include the headteacher and he/she is supposed to teach full-time basis, in addition to his/her administrative functions. A JHS with double-stream with six classes should have a numerical strength of ten teachers and the headteacher is expected to teach for a maximum period of five hours per week in addition to his/her administrative roles. The duration for a school session within a day is five and half hours and this adds up to twenty-eight hours per week. In accordance to the GES regulations, a subject teacher is to teach for

a minimum of 25 periods a week and a maximum of 27 periods. On the average, every teacher has free periods of four within which he/she can prepare his/her lesson plan, mark students' exercises, record students' marks and also work on continuous assessment records of students.

The Ghana Education Service, as a matter of urgency, has made an extension of the instructional time in the case of JHS without any increase in the three-year duration. The academic calendar for both primary and junior high schools for the 2004/2005 academic year onwards was increased to forty-one and forty-six weeks respectively as issued by GES in 2005. There had also been a reduction in the vacation period for JHS. This had been a welcomed news as there is a need for the instructional time to be intensified for good results realized within the three-year period of the JHS programme.

In order to achieve desirable results, headteachers and teachers have to explore all the possible avenues to manage their time well. The management of time is the core for all teaching activities which includes how the day is organized, the organization of the classroom, and recording of pupils marks (score).

According to Tamakloe, Atta and Amedahe (1996), every aspect of instructional programme of a school depends on the effective management of pupils in the classroom. There is therefore, a need for co-operation between all members of the class for successful and effective teaching and learning to take place.

Time is a very important resource which has to be managed well if we want to accomplish our goals. Hindle (1998) puts it that "time is costly; it is a sobering exercise to calculate exactly how much one's time costs and then realize how much of it is not being spent effectively"(p.8).

In the Ghanaian school system, activities are programmed for both curricula and co-curricula activities. A plan of action is drawn which covers the whole year and then broken down into sessions. This pre-supposes that any instructional time wasted or under-utilised will result in a limited coverage of the designed curricula, which in turn, will have tremendous negative impact on pupils' achievement (Koomson, Akyeampong & Fobih, 1999).

The instructional time will be effectively managed only if the resources (human and material) at our disposal are put to good use. The pupils/students are seen as the co-pilots of education who should readily perform their task (in the form of learning, doing assignments and homework) given to them by teachers so that the classroom management can be achieved.

When the 1987 New Education Reforms was reviewed in 2007, new syllabus was put in place, which had placed responsibility on the headteacher in ensuring that copies of the new syllabi are available and teachers access them in their scheme of work and lesson notes preparations. In view of current changes, there should be an effective supervision by the headteachers with regard to the teachers' strict adherence to lesson notes preparation. The head teachers and their teachers should all endeavour to achieve desirable learning outcomes from pupils through the realization of management of the instructional time.

A survey conducted in 1994 by the Ministry of Education and the World Bank Monitoring Team has shown that there was mismanagement of time on the part of teachers. Studies have shown that the mismanagement of instructional time fell below expectations and militated against the high academic excellence by pupils in our basic schools. Based on their findings, in order to find remedies to the problems, there was a publication in which GES instructed the heads of our basic schools that for any change to be effected on the time-table, the head should do it in close collaboration with the community leaders with approval from the District Director of Education. This directive was given by the GES Director- General in a circular with Ref .No. EP.32/VII/38 of 26 July, 1993, under the heading "Basic Education Schools' Working Hours and Time Tables". That gave an indication that in planning the time-table, the headteacher should be flexible and that any instructional time mismanaged should be paid for by the end of the day. To buttress that another circular was issued with the heading "Punctuality and Attendance of Teachers and Pupils in Basic Education Schools" (Ref No. EP/32/VII/45 of 16 September, GES Circular, 1993). The circular put some measures in place to check on the punctuality and attendance to school programmes by teachers and pupils.

To curb the misuse of instructional time on the part of teachers, a special circular was issued by the Director-General of GES to all District Directors to that effect. It was emphasized that all meetings involving the headteacher and the circuit supervisors, the district directors should be held outside the normal school periods. For effective teaching and learning outcomes to be qualitative

and achievable the instructional time indicated on the time-table should be strongly adhered to and by so doing lateness, truancy and absenteeism especially on the side of teachers would be brought to the barest minimum. That meant that all co-curricula activities including sports, visits to the offices, banks, etc., should not be made within the school time and to ensure that it was adhered to a circular was issued to that effect (Ministry of Education, 1994).

From the foregoing, the essence of instructional time management comes to the fore. This is because when a school's instructional time is managed well, it impacts positively on the learning outcomes. Also, the syllabi of the various subjects are completed within the stipulated time. Finally, it ensures that there is tenacity of purpose among teachers and learners.

Statement of the Problem

In spite of the control measures put in place to check mismanagement of instructional time in our schools by the headteachers and teachers, it appears there are still abuses in the system. The attitudes of some heads of schools as well as teachers towards school programmes negate the efforts being made to reduce the mismanagement of instructional time in schools. Owing to that fact, stakeholders in education have raised issues of concern and have made the clarion call to teachers to eschew all negative practices so as to give quality education to pupils.

The loss of instructional time generally may be attributed to numerous reasons and amongst them are:

1. Public holidays and vacation periods;
2. Teachers' absenteeism due to maternity leave or sick leave;
3. Collection of salaries from banks by teachers during school hours.

So many reasons could be assigned for these lapses and the major ones are that the headteachers may not have been doing effective supervision in their various schools. Secondly, they may not be getting the necessary co-operation and support from their teachers so as to enhance teaching and learning processes. It is against this background that it is necessary to investigate the challenges faced in the management of instructional time in the public junior high schools, as well as to find out the avenues through which teachers use and manage the instructional time at their disposal.

Purpose of the Study

The purpose of this study is two-fold, firstly to investigate how the public JHS in Mampong municipality manage instructional time. Secondly, to find out the challenges faced in the management of instructional time in schools. Apart from the general purposes stated above, there are five specific objectives that the study seeks to find answers to. The specific objectives are:

1. To assess the total/average time spent on actual instruction per day in the schools.
2. To identify the factors which contribute to the ineffective use of instructional time.

3. To assess the challenges headteachers face in managing instructional time.
4. To find out the challenges teachers encounter in the use of available instructional time.

Research Questions

The following research questions will guide the study in terms of data collection.

1. What is the total/average time spent on actual instruction per day?
2. What factors contribute to ineffective use of instructional time?
3. What challenges do headteachers face in the management of instructional time?
4. What challenges do teachers face in the use of available instructional time?

Significance of the Study

The study is aimed at bringing out how time is managed in both the teaching and learning processes and what measures could be put in place to avoid wastage of time so as to facilitate the improvement of pupils in their academic pursuits. It is also envisaged that the findings of the study will provide a guide for scheduling teachers' work both in and out of the classroom.

Again, it will provide the basis for developing guidelines for the improvement in the quality of teaching and learning in our JHS. Lastly,

suggestions and recommendations made from the findings will go a long way to facilitate the planning and the management of instructional time by headteachers and teachers in Mampong Municipality and other districts in Ghana.

Delimitations

The scope of study was concerned with the various factors that influenced the management of instructional time among public Junior High Schools within Mampong Municipality. Consequently, issues like: the number of subjects taught by a teacher, time tabling, lesson notes preparation, inspection of lesson notes by heads, challenges of teacher absenteeism, handling of staff meetings, managing teacher-free periods and supervision of teachers during lessons were looked at.

Limitation of the study

The main limitation of the study came from biases respondents have in respect of the management of instructional time. This stems from the fact that some pretended to be going by the laid down regulation regarding instructional usage during the observation process. When this was discovered, the observation was done on the blind side of respondents and this reduced the biases.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter of the study is devoted to the review of literature relating to instructional time usage in particular and time utilization in general. The review will look at policies regarding instructional time usage at different levels of education particularly, at the pre-university levels in Ghana. Other topics that have some relation with the usage of instructional time in schools shall be captured to give the review a broader outlook. These include: Conceptualising Time, The Concept of Instructional Time, Historical Development of Instructional Time, School Working Hours and Time-tables, Co-curricula Activities, Lesson Planning, Management of Instructional Time in the Classroom, Instructional TimeManagement and Pupils'Achievement, Sources of Instructional Time Loss: Empirical Evidence and Summary of the Literature Review.

Conceptualising Time

Some schools of thought have propounded that 'time' is an intangible resource and one of the major features of human development. It is also said that time is a non-renewable resource and its effective use can be considered to be one of the indicators of the socio-economic development.

According to Dowden (2007), time is strictly finite and cannot be increased so one has to look at its use closely. It behoves on head teachers, teachers and pupils to be conscious of its use. Instructional hours should be used efficiently to enhance both the teaching and learning processes. This poses a big question to both educational policy-makers and researchers on how instructional time should be effectively-managed.

This section of the literature review provides a conceptual framework for the study of the management of instructional time in the Junior High Schools within the Asante Mampong Municipality. It further facilitates the determination of factors that have an impact on the management of instructional time generally.

Optimum utilization of instructional time has of late been a burning issue with respect to effective teaching and learning. Owing to this, several academics have argued that schools are only effective when the curricula of schools are demanding and stakeholders in education explore all avenues to engage the services of active and well-qualified teachers who expect much from their students (Evans-Andris, 2000; Barbour, 1999).

Also, some studies have shown that the volume of time spent on instruction as well as extra time students spent for additional work is important in determining the performance of a school. As Gere (2005) argued, the quantum of homework that are given to students plays a key role in improving performance (Royelli, 2006; Mermin, 2005; Evans-Andris 2000).

Royelli (2006) and Mermin (2005) argued that a key educational resource which provides a good foundation to support efforts in improving the quality of teaching and learning in schools is the way the time is used as instructional tool. It has been pointed out that time management is unsuitable in the sense that many people cannot really manage time, let alone produce it - for it is a free gift of nature. As a result of that it behoves on people to see to its proper management.

The Concept of Instructional Time

Berliner (2009) stresses that to understand, predict and control are the fundamental goals of science. Therefore a concept reputed to help reach all three goals in an area of scientific concern would ordinarily be considered extremely useful, quite powerful in terms of its explanatory power and certainly worth making a fuss about. The multifaceted concept of "instructional time" is such a concept.

It must be emphasized that this section of the literature was originated by David Berliner, Professor at the Arizona State University. He and others dilate extensively on the concept of instructional time and related issues. In his deliberations, he cited the works of several other scholars. Woelfel (2005) indicates that some scientists and educational scholars find the concept of instructional time to be intellectually unexciting, so commonsensical, and of such obvious importance that it only leads to trivial understandings and to findings that have the status of truisms (e.g., students who spend more time

studying learn more) (Jackson, 1985; Phillips, 1985). Some have dismissed the results of research on instructional time as ideology, but not research (McNamara, 1981). Others have found that when the *concept* of instructional time becomes the basis for creating a *variable* with which to do research, the measurement issues prove to be vastly more complex than most scientists first believe about this (apparently) conceptually simple variable (Karweit, 1985; Karweit & Slavin, 1982). Some have argued that even when measured adequately, instructional time variables are not particularly powerful (Levin & Tsang, 1987; Levin, Glass & Meister, 1984; Karweit, 1985). And others note, in line with the cognitive revolution that has changed the focus of contemporary research, that instructional time is really a poor proxy for examining what is going on in the heads of students, which is really where instructional research should be focused (Peterson, Swing, Braverman & Buss, 1982). On his part, Sims (2008) indicates that the critiques, both the uninformed and the helpful ones, have failed to persuade many scientists and reformers in the field of education. The latter group, 'in which I include myself', have found this rather commonsensical and quite obvious concept to possess very desirable characteristics. As with some people, its plain character and ordinariness believe its many virtues. The fact is that instructional time has the same scientific status as the concept of homeostasis in biology, reinforcement in psychology, or gravity in physics. That is, like those more admired concepts, instructional time allows for understanding, prediction and control, thus making it a concept worthy of a great deal more attention than it is usually given in

education and in educational research. But before the concept of instructional time can be discussed further and its desirable properties explored, some clarification of what is meant by instructional time is in order. The multifaceted nature of this concept and its historical roots must first be understood.

Berliner (2009) came in again and said instructional time should be thought of as a superordinate concept and in this way it is no different from the concept of "mammal," which encompasses organisms as disparate as elephants, mice, platypuses, bats and human beings, as homo sapiens. Thus, when instructional time is referred to a family of concepts some of which have not yet achieved the status of concepts in other more mature scientific fields. That is, “we do not always have agreement about the meaning of the concept and about the operations by which it can be reliably and validly measured” (para.6). Among the many terms encompassed by the superordinate concept are enumerated and discussed in the subsections that follow.

Jimerson, Woehr, Kaufman and Anderson (2004) dilated on Allocated Time. It is usually defined as the time that the state, district, school, or teacher provides the student for instruction. For example, a school may require that reading and language arts be taught for a period of 90 minutes every day in the second grade. Allocated time is therefore the time block set aside for that instruction–90 minutes a day, or 7 .5 hours a week or 300 hours a school year. Sometimes this is called ‘scheduled time’, to distinguish it from the time actually allocated by teachers. This can prove important distinction when the concept of allocated time is used to create a variable for a research study. When

that is the case it has been found that measures of allocated time derived from any source other than direct observation of teachers invariably over-estimate the actual time provided in schools for instruction in a curriculum area. In the original "model of school learning," the article that began contemporary research on instructional time Carroll, 1989 as cited by Jimerson et al (2004), allocated time was called "opportunity to learn."

The issue of Engaged time was elaborated on by Silva (2007). This term is usually defined as the time that students appear to be paying attention to materials or presentations that have instructional goals. When the concept of engagement is used to create the variable of student engaged time the variable is usually measured by classroom observers or coded from videotapes of students in learning situations. Students' self-reports of engagement have also been used as a variable. Engaged time is always a subset of allocated time. A synonym for engaged time is "attention".

Baines (2007) explained what Time-on-task meant in instructional time management. He explained that time-on-task is normally defined as engaged time on particular learning tasks. The concept is not synonymous with engaged time, but it is often used as if it were. The term time-on-task has a more restricted and more complex meaning than the term engaged time. It makes clear that engagement is not all that is desired of students in educational environments. Engagement in particular kinds of tasks is what is wanted. Thus, engagement may be recorded when a student is deeply involved in mathematics or a comic book during a time period allocated to science. Time-on-task,

however, would not be recorded because the task in which students were to be attentive was science. Time-on-task should be thought of as a conjunctive concept, not nearly as simple a concept as engagement. This distinction, though often lost, makes clearer that time is, in a sense, a psychologically empty vessel (Gage, 1978). Time must be filled with activities that are desirable (Carroll, 1989). Time-on-task as a variable in empirical research is usually measured in the same way as engagement, though when the distinction noted above is kept in mind, the curriculum, instructional activities, or tasks in which the student engages are also recorded.

The concept to be discussed which was put forward by Chmelynski (2006) is Academic Learning Time (ALT). Like the other sub-concepts, it is usually defined as that part of allocated time in a subject-matter area (physical education, science, or mathematics, for example) in which a student is engaged successfully in the activities or with the materials to which he or she is exposed, and in which those activities and materials are related to educational outcomes that are valued (Berliner, 1987; Fisher, Berliner, Fully, Marliave, Cahen & Dishaw, 1980 all cited in Chmelynski, 2006). This is a complex concept related to or made up of a number of other concepts, such as allocated time (the upper limit of ALT); time-on-task (engagement in tasks that are related to outcome measures, or, stated differently, time spent in curriculum that is aligned with the evaluation instruments that are in use); and success rate (the percent of engaged time that a student is experiencing a high, rather than low, success experience in class). Academic learning time is often and inappropriately used as a synonym

for engagement, time-on-task, or some other time-based concept. Its meaning, however, is considerably more complex than that as will be elaborated on below.

Waiting time, according to Alexander, Entwisle and Olson (2007) can be explained as the time that a student must wait to receive some instructional help. Meaning, the time spent waiting to receive new assignments from the teacher, on a line to have the teacher check work, or waiting for the teacher's attention after raising one's hand in class are examples of waiting time. This member of the family of instructional time concepts is concerned with instructional management and it is not to be confused with wait-time, that is, the time between the end of a question asked by the teacher and beginning of a response by a student. The latter member of the family of instructional time concepts is concerned with instruction and cognition, rather than classroom management (Rowe, 1994; Tobin, 1987).

Another sub concept that was discussed under this section is Transition time. In the view of Baines (2007), the term is explained as the non-instructional time before and after some instructional activity. The occurrence of transition time would be recorded within a block of allocated time when a teacher takes roll or gives back homework at the beginning of an instructional activity; and it would be recorded when books are put away or jackets and lunches are brought out at the end of an instructional activity. The concept describes the inevitable decrease in time allocated for instruction that ordinarily accompanies mass education.

Again, Berliner (2009) explained what was 'aptitude' in respect of instructional time concept. This word is used as it relates to instructional time usage. It is defined in this context as the amount of time that a student needs, under optimal instructional conditions to reach some criterion of learning. High aptitude for learning something is determined by fast learning; low aptitude is reflected in slow learning. This time-based definition of aptitude is unusual and will be elaborated on below. A definition of this type serves to point out how some members of the instructional time family do not, at first glance, seem to be family members (Wiley & Harnischfeger, 1994 as cited by Berliner, 2009).

Next in line is perseverance. According to Silva (2007), the term perseverance is used here to connote the amount of time a student is willing to spend on learning a task or unit of instruction. This is measured as engagement, or the time-on-task that the student willingly puts into learning. Perseverance is another of the instructional time concepts that does not at first appear to belong to the family. Although this concept is traditionally thought to be a motivational concept, when operationalized in a certain way, it becomes a variable that is measured in time, and thus becomes an instructional time concept as well (Tobin, 1987 as cited in Silva, 2007).

Pace is another word used by WestED (2001) in explaining the components of the concept of instructional time. He states that pace is usually defined as the amount of content covered during some time period. For example, the number of vocabulary words covered by Christmas, or the number of mastery units covered in a semester will differ from classroom to classroom. In

educational systems where standardized tests are used as outcomes and where those tests sample items from a broad curriculum, students whose teacher exposes them to the most content ordinarily have a better chance of answering the test questions. As the pace of instruction increases, however, depth of coverage usually decreases.

On their part, Aronson, Simmerman and Carols (1998) stressed the fact that instructional time in many other educational and psychological concepts and variables are part of' the family of instructional time concepts and variables, but they did not elaborate on them. Furthermore, they stated that many areas of educational and psychological studies are made more comprehensible when variables are reported in a time metric. They suggested to their audience to consider some examples, which included the fact that classroom discipline can be studied through time-off-task; also, student's cognitions can be reported as time spent processing appropriate or relevant information, as determined from the self-reports of learners. Again, the fact that teacher decision making can be studied without using instructional time variables, as when a researcher reports the number of decisions of a non-trivial nature that are made during interactive teaching, as coded from a teacher's response during stimulated recall. But teacher decision making can also be studied by recording the number of decisions made per unit of time say per hour or per day; by classifying the types of decisions that are made during various parts of the lesson; by analyzing the kinds of decisions made by segment of the school day or of the school year; by measuring latency when teachers are confronted with a simulated classroom

problem to solve, and so forth. Each of these ways of studying teacher decision making brings into play instructional time. Scores of important and seemingly disparate concepts and variables are sometimes members of the instructional time family, making instructional time a multifaceted concept. It is not as clean a concept as "peninsular," but much more like the concept of "game" that Wittgenstein (1968) describes in his treatise on language. That same concept is used to describe football, poker, dating, Nintendo, publishing of academic articles and a host of other activities held together by a slim but somehow recognizable "family resemblance" (Berliner, 2009).

Historical Development of Instructional Time

Due to the importance instruction time plays in educational delivery enterprise, this section of the review looks at the historical development of the concept. In fact, concerns about instructional time are not new in so far as teaching and learning are concerned. Consequently, it has been stressed that:

> No adult who ever taught a child could fail to learn that instructional time, particularly time-on-task, is an important instructional variable. Throughout the ages, in virtually all treatises on teaching and learning, the obviousness of this relationship was made apparent (Pintrich & De Groot, 1990, p.17).

In the scholarly literature of modern times, Currie whose writings dated back to the late nineteenth century was cited by Moskowitz and Hayman (1996). Along the same thoughts, Kauchak and Eggen (2008) maintained that:

> The art of teaching [consists] of the means by which the teacher sustains the attention of his class. By attention, we do not mean the mere absence of noise and trifling; or that inert passive state in which the class, with eye fixed on the teacher, [gives] no symptom of mental life; not that intermittent and almost unconscious attention bestowed on some casual topic which strikes their fancy; not the partial attention given by a few ... in the immediate neighbourhood of the pupil addressed. The only satisfactory attention is that which is given voluntarily and steadily by all during the entire instruction and in which the mental attitude of the class is actively engaged along with the teacher in working out their own instruction. (p. 224).

It revealed that in the writings of Currie (1978) and that of Carroll (1989) there is what is called perseverance–the willingness to attend – and for what some call cognitive engagement or active learning variables discussed in contemporary research that are part of the instructional time family of concepts. The terms cognitive engagement and active learning are used by some researchers to refer to time spent by students processing information in a non-automatic, non-passive way, and at a deeper level, with more genuine thoughts about the information that is being processed. It is worth noting that the first

empirical study of classroom teaching that was used to inform arguments about the school curriculum was also a study of instructional time, with a particular concern for cognitive engagement or active learning.

From another point of view, WestEd (2001) cited the works of Joseph Mayer Rice who also wrote during the nineteenth century. According to Berliner, Rice, rather than philosophizing or using moral reasoning to inform his position about schooling, as was the custom of the time, instead used modern scientific methods. He observed teachers and students in classrooms and tested learning outcomes associated with instructional time spent on spelling. His report of the "spelling grind" – the deadly, daily, extensive time spent on spelling – is an attraction study in the history of research in education, particularly in research on teaching. He examined the effects of allocated time on learning, and he discussed his observations of engaged time and learning, particularly pointing out the lack of cognitive engagement by even the most studious of the elementary school children that he observed. His research yielded a negatively accelerated, asymptotic learning curve as a description of the relationship of spelling time to achievement in spelling. This wavy relationship, showing first an increase in spelling achievement as time spent in spelling drill increases, and then a lack of any increase in achievement after a certain amount of time in spelling drill was spent, still is a reasonable description of a good deal of school subject-matter learning.

Baines (2007) adds the views of more authorities in the discussion of the historical development of the instructional time concept. This time, he cites the

thought of E. L. Thorndike (who wrote in the early twentieth century). Baines indicated that in Thordike's influential writings on the "laws of learning," he is best remembered for his law of effect. But of great concern to him was the law of exercise, of practice, whereby he made it clear that "duration" was a major and a powerful variable in the learning process. In a similar dimension, Baines cited William James, another great philosopher, psychologist and educator, in his talks to teachers, beginning around 1891. He was focused on the importance of attention. According to Baines, William James noted that sustained time-on-task is one of the major factors in school learning and thus the control of this variable was a major means by which teachers could accomplish their work. The turn of the century also saw the works of another philosopher, psychologist, and educator – John Friedrich Herbart – rise to prominence. Part of the agenda of the Herbartians was to teach management of instructional time. An emphasis on teacher planning was designed to aid teachers in the control of attention and to help them specify lessons and content that were compatible with the goals of education. The Herbartians probably had it right. Contemporary research suggests that there probably are no effective teachers, as measured by standardized achievement test scores, who are not good at the management of instructional time, the control of attention, and the alignment of curriculum content with the desired outcomes of instruction. These simple, alterable variables are embodied in the more modern empirically derived (though hardly new) concept of ALT defined above.

School Working Hours and Timetables

Instructional time is the exact or the proper use of the period allotted to teachers to interact with pupils on topics to be taught or to be learnt on the time table as indicated in the teachers' scheme of work and the lesson plan for a particular period of time. The implication is that using instructional time more appropriately is not only the appearance of the teacher physically in the classroom (Kim, 1999; Huyvaert, 1998).

This section is further discussed with some sub-sections which are presented under the following headings:

Management techniques of instructional time

Working hours and time-tables of schools

Co-curricular activities

Lesson planning

Management of instructional time in the classroom

Time management and pupils' achievement

Management Techniques of Instructional Time

Some authorities have developed a lot of techniques on the effective use of instructional time, which head teachers and their subordinates can make use of so as to improve upon their work in the school. The head and his/her teachers should engage themselves in planning all the school activities and apportion time to each of them. Cerdan-Infantes and Vermeersch (2007) argue that time

management is an essential feature on a very effective and productive educational system which all educators need to realize.

Bray (2006) indicates that successful time management evolves step by step with the primary aim of setting priorities in the school. This calls for a decision to be taken and all activities listed in order of importance (urgency and then worked them through one at a time). Every school head needs to prioritise by developing plans both in the short-term and in the long-term. This is because, planning is a managerial process and that the head has to plan the school activities at the beginning of the academic year. It should be done by teachers and pupils at any level and thus prevent wastage. It behoves on the head and his/her subordinates to plan for the daily, weekly and termly activities of the school (Cerdan-Infantes & Vermeersch, 2007; Bray, 2006).

In a school situation, the tools for planning are the syllabuses and schemes of work (Abadzi, 2009). In Ghana, prior to the implementation of the 2007 Educational Reform revised syllabuses were issued to the district directors for onward distribution to the schools. The Headteachers' Handbook (1994) makes it mandatory that headteachers are responsible for acquiring the most current syllabuses and are to encourage teachers to use them to prepare their schemes of work for the subject(s) they teach.

As Tamakloe, Atta and Amedehe (1996) asserted that teaching, like any human endeavour, demands serious preparation. A well-taught lesson portrays quality and expertise, so every successful teacher plans his/her scheme of work in advance; break the syllabus into manageable activities and arrange them

sequentially into topics and they are taught in relation to other topics at the appropriate time.

The headteacher in playing his/her supervisory role should consult the syllabus to ensure that the teachers' scheme of work and the lesson plans conform with it to enhance both teaching and learning. Preparation by both the head and teachers should be made in advance (Smith, 2000). As Spodek (1986) puts it, "planning begins before the children enter school" (p.65). All teaching materials and equipment should be made readily available to the teacher and the headteacher should assist the teachers to get the necessary information for the preparation of teaching materials (Stallings, 2006; Stevens, 1993).

Working Hours and Time-Tables of Schools

Nickel, Rice and Tucker (1995) observed that time, as it is, is not a resource that can be replenished. Any bit of time that is lost can never be regained. Organisations and individuals using time should be accountable for it. On his part, Bray (2006) notes that people who are goal-oriented, walk briskly with confidence but if they are procedure-oriented, they walk leisurely.

At this juncture it is imperative to indicate that the concept of time is defined as the quantity that you measure using a clock. This has been divided into seconds, minutes, hours, day, week, month and year. The divisions in time are used in our everyday description of the past, present as well as the future. These are expressed in days, weeks, months and year and then depicted in seconds, minutes and hours on calendar, and clock respectively. Schools across

the country run an academic calendar beginning from the month of September and ending in August. In the 'The Status of Teachers', published in 1984 the ILO and UNESCO stressed that there was a need for the number of hours in operation within a day as well as for the week to be decided on by all teachers' associations (Ben-Jaafar, 2006; Lewis & Lockheed, 2006; Lockheed & Verspoor, 1992).

The duration of the academic year for Junior High School in Ghana is 45 weeks for both teaching and learning processes. The academic calendar has been divided into three terms being first term 14 weeks; second term 14 weeks and third term 17 weeks (Ministry of Education Circular, 2003). There are nine periods in the normal school hours, which are made up of 315 minutes per day. In a situation where the school runs the shift system, the morning session has nine periods of 270 minutes and the afternoon session has eight periods of 240 minutes per day. The academic calendar of a school involves teaching and learning as well as other co-curricula activities, such as cultural festivities. The fact of the matter is that the instructional time that is allotted for both teaching and learning processes in the classroom are not used as expected. Both sporting and other co-curricula activities do take a portion of the allotted time (Abadzi, 2006; Attar, 2001).

There is a provision of a blank time-table (Appendix B) to all Headteachers who are to fill it in such a way as to meet the demands of the locality in which the school is situated. The GES provides suggestible time periods for each subject per week (GES, 1998). The modification of the official

timetable needs a prior approval from the District Director of Education. During raining season, schools open late due to the morning rains and in such cases the headteacher ought to ensure that the time lost should be accounted for later in the day. There are certain annual events which usually take place in the early hours of the day, so it is expedient to open school late and close late so as to curb lateness among both teachers and pupils. Time-tabling in schools should be done by both the headteacher and the teachers taken into consideration the needs of teaching staff, pupils as well as the community. The time-table should be copied by teachers who handle the individual subjects as well as the form teachers who are to display them in their respective classrooms. The headteacher should also post the master time-table at a conspicuous place in his/her office so as to enable any visitor see it at a glance and know what is going on in each of the classrooms at any particular point in time with regards to the teaching and learning processes (Abadzi, 2007; Ben-Jaafar, 2006; Lewis & Lockheed, 2006; Attar, 2001; Lockheed & Verspoor, 1992).

In the preparation of the timetable, subjects which involve practicals such as technical drawing, agricultural science and catering are given consideration such that double periods are allotted at least once a week. This enables the teachers concerned get enough time to cover both the theory and the practical aspects of those subjects effectively.

Fisher and Berliner (1985) asserted that poor time-tabling could lead to teachers being under-utilized. Since the time-table is planned taking into cognizance the needs of both the school and the locality, there should be

observation of the stipulated times for reporting for school, break and closing respectively. Bells and drums are used to signal both the beginning and ending of lessons or break periods (Stallings, 2006; Abadzi, 2006).

Co-Curricula Activities

These are activities which usually take place outside the normal class periods and they play a leading role in the school curriculum. They are very important in the total well-being of the pupils. In the Headteachers' Handbook (1994), co-curricula activities are categorised into four and they are as follows:-

1. Special occasions such as Independence Day Anniversary, Cultural festivals, Speech and Prize-Giving/Open Days, Singing competitions, etc.
2. Educational tours, excursions to places of interest and field trips.
3. Sports and games competitions/ cultural festivals.
4. Club Associations such as Debating Society, Voluntary Association, School Choir, etc (p.56).

Responsibilities in co-curricula activities have been given to teachers in the school but the handling of these assignments do not in any way affect the work of teachers in the classroom.

The Ministry of Education issued a circular giving directives on how the District Directors of Education should ensure that co-curricula activities should not be allowed to compete with the instructional time. It further stated that activities on sports and other co-curricula activities should be held outside the

normal school periods unless otherwise specified by the Ministry of Education in a circular to GES. When it comes to times some of the pupils are selected to represent their schools in a co-curricula activity depending on the number taking part, normal classes should go on in their absence and on their return, special classes should be run for them so as to make up for the loss. There should be flexibility in the timetabling in order that changes could be made easily.

Lesson Planning

Planning is an important managerial skill which every individual should have. A teacher is no exception and for that matter he should be in the position to plan well in order that instructional time could be managed effectively in the classroom. The complex nature of planning makes instructions so crucial as well as involving a lot of skills such as: classroom management/control, teaching techniques, the writing of instructional objectives – the objectives to be achieved within the period, methods of teaching to be used and assessment of pupils as well as the teacher ((Dia, 2003; Attar, 2001; Njie 2001).

Planning of a lesson should be done by the teacher with all the seriousness it deserves because a well-prepared lesson notes serves as a morale booster and builds a lot of confidence in discharging his/her duties. If the lesson presentation is done sequentially then the teacher would be able to get a positive feedback from the pupils (Kim, 1999; Stevens, 1993). Tamakloe, Atta and Amedahe (1996) asserted that the success of any lesson dwells on the quality of its plan and as such good teaching requires a serious preparation.

There has been the provision of syllabuses by GES for teachers to use in planning both the scheme of work and the weekly forecast. The academic calendar for the year provided should be displayed on the notice board by the headteacher in order to facilitate the teachers' preparation for the term's work which involves the planning and the preparation of scheme of work, weekly forecast as well as lesson notes (Abadzi, 2009; Attar, 2001).

Instructional Time Management and Pupils' Achievement

It must be noted there is consensus among scholars as whether the presence of teachers in the classroom throughout the stipulated instructional time boost the academic performance of pupils. The fact about instructional time is that in almost all educational systems, government authorities mandate a certain number of years and a set quantity of hours per year during which pupils are required to be in school and engaged in classroom learning (Clemens, 2004; Amadio, 1997). To be sure, not all school and classroom time are devoted to formal instruction or pupil learning. Nevertheless, the organisation of school time is the object of sustained attention by educational officials. More importantly are decisions regarding how this time should be distributed in the light of general educational objectives and specific curricula goals (Amadio, Truong, Ressler & Gross, 2004). Moreover, given the inextricable links between schools and the surrounding society, professional associations, trade unions, teachers and the business community often voice concerns about official determinations of school time and its distribution across curricula subject areas.

Parents are also interested in time policies - not only due to their impact on learning outcomes and school success, but also how they address the building up moral character, life aspirations, community responsibility and extended family loyalty (Baker & Tendre, 2000).

Setting children from poorer families aside, the time spent in school represents a relatively protected space outside the vicissitudes of rural or urban life – often an alternative to long hours in low-paying jobs or unpaid labour (Amadio, 1997). In short, school time is not simply an issue of teaching and learning, it is also an institutionally embedded time interval where societal demands, educational purposes and parent-child ties intermesh (Baker & Tendre, 2000).

Furthermore, it must be made clear that there is a widely held assumption in research literature which concerns the impact of instructional time on pupil- learning (Millot, 1995; Anderson, 1994; Smyth, 1985; Bloom, 1974). Simply stated, the more time that educational authorities require that pupils be present in classrooms, the greater the chances of positive time effects on desired learning outcomes (e.g., knowledge acquired, skills mastered, values and attitudes internalised). More complex models of allocated time take into account school and classroom contingencies such as teacher absences due to strikes, in-service training, conferences or illnesses, and time allocated to non-instructional activities such as recreation, breaks, examinations, holiday celebrations or classroom management (Clemens, 2004; Harnischfeger & Wiley, 1977). Nevertheless, the core, intuitively sound, notion remains: pupil achievement

increases when students are given greater opportunities to learn, especially when 'engaged learning time' is maximized. Although some studies raised doubts about the learning effects of more instructional time (Demfer, 1987; Anderson 1984; Karweit, 1978), the presumed positive benefits of instructional time have considerable currency among international and national policy-makers.

The focus of current studies is not attempt to examine the empirical validity of the afore-mentioned claims. Rather, they advance a different argument: the educational rhetoric claiming that instructional time has a positive impact on pupil achievement has diffused rapidly in the world. As a result, and regardless of the scientific merit of this claim, we expect that countries in different world regions will, over time, increase the intended amount of instructional time. In short, this report examines whether the institutionalisation of the 'more time-more learning' principle has contributed to a global increase in the quantity of intended instructional time mandated by educational authorities (Sankar, 2009; Amadio, et al, 2004; Clemens, 2004).

Sources of Instructional Time Loss: Empirical Evidence

Abadzi (2009) indicates that to be able to explain the concept of instructional time loss and highlight issues more systematically, other study results have to be used in support base. She emphasizes that most of the studies she cited have been subjected to peer-review by colleague scholars and have been published in peer-reviewed journals.

According to Abadzi (2009) citing the works of several other researchers, instructional time loss may come from the school level. She notes that schools in some poorer countries systematically seem to open later or close earlier than the official time-tables. For example, some schools in Bangladesh close a month before examinations so that students can prepare on their own. An unpublished study commissioned by the World Bank showed that in Burkina Faso over 16 percent of the official allocated time may be lost due to examinations and extended breaks during the day (Dia, 2003). In the Dominican Republic, schools sampled by a USAID-financed study were imparting instruction for only 77 percent of the allocated time; the cancellation reasons included meetings with parents and district officials, teacher training and strikes. Strikes also accounted for closures in Honduras, where schools were reportedly open for only 114 days of the official 200 in 2001 (Operations Evaluation Department, OED, 2004). In Mali, an unpublished survey financed by the World Bank found that schools functioned for only 70 percent of the official time (Kim, 1999), partly due to the delayed appointment of teachers and supervision weaknesses. In Nepal, donor-financed surveys showed schools operating on average for 3 hours a day, "a fact that halved the available teaching time from over 1,000 hours to just 540 hours" (Watkins, 2000, p.112). But overall, data on the incidence and rationale for school closures are sparse. More detailed research is needed to capture and quantify the various patterns of losses in order to inform policy-makers.

The second source of instructional time loss could emanate from teachers absenting themselves from school. Thus, teacher-absenteeism has been the subject of well-designed and vetted studies. Several studies were conducted by World Bank staff (Patrinos & Kagia, 2007; Chaudhury, Hammer, Kremer, Mularidharan & Rogers, 2004b, 2004c), who reported absenteeism in primary schools, ranging from 11 percent in Peru to 27 percent in Uganda. Absenteeism has been studied in considerable detail in South Asia, where loss rates are high and improvements limited (Chaudhury, Hammer, Kremer, Muralidharan, & Rogers, 2005). Surveys of health service providers, where available, suggest a broader effect of low-quality services to the poor.

Furthermore, Abadzi (2009) recalls that even when teachers are not absent, they may come to school late. This is an important and little-understood source of time loss, but data on this issue are limited. Alternatively, teachers may avoid teaching. For example, the PROBE study in India by De and Dreze (1999) found that in only 53 percent of the schools visited by the research staff were all teachers actually teaching in their classrooms; in 21 percent of the surveyed schools teachers were mainly "minding the class." In the remaining 26 percent they were talking with other teachers, sitting/standing outside the room, were in the headteacher's office, or were observed in other non-teaching activities. Though correlation studies do not prove causality, published studies suggest that teacher-absenteeism is related to lower student test scores in primary schools (Suryadarma, Suryahadi & Sumarto, Rogers, 2004; Chaudhury, Hammer, Kremer, Mularidharan & Rogers, 2004a). One study found that a 5

percent increase in the absenteeism rate of teachers who stayed with the same class for two years reduced student's gains by 4–8 percent during the year; the size and precision of these estimates were the same for both Maths and English (Das, Dercon, Habyarimana & Krishnan, 2005). In an Indonesian study, higher teacher-absenteeism was related to lower fourth-grade student achievement on maths (but not dictation) after controlling household characteristics, teacher quality, and school conditions (a study cited in Lewis & Lockheed, 2006, p. 67). Some authors suggest that teacher-absenteeism may encourage similar behaviour among students in countries such as Mali and Somalia (EARC, 2003; Lockheed & Verspoor, 1992). Absenteeism may also perversely affect students' rates of promotion to the next grade. A vetted study in the North-West Frontier Province of Pakistan (King, Orazem & Paterno, 1999) found that higher rates of teacher-absenteeism increased student promotion rates for a given level of test scores but reduced student continuation rates. A likely explanation is that absent teachers make less accurate progress assessments and promote students who do not know enough and subsequently do not wish to continue their studies. Nevertheless, these well-designed studies do not focus on the amount and quality of time lost. Students of absentee teachers may be unoccupied or attend other teachers' classes, and these two treatments are likely to have different learning outcomes. So, the effects of teacher-absenteeism on student achievement need to be clarified through robust research designs (Abadzi, 2009).

The reasons for teacher-absenteeism have been investigated to some extent (Rogers, Lopez-Calix, Chaudhury, Hammer, Cordoba, Kremer & Muralidharan, 2004). Some absenteeism are unavoidable, but absence rates are lower in countries with a higher per capita income. Higher absence rates are predicted by factors at the community level (remoteness, parents' education level), teacher-level (teacher's professional or age-related seniority), and management level (physical infrastructure, multi-grade teaching, inspection frequency). Increasing accountability to parents may result in lower absenteeism rates. For example, schools in Honduras, where communities are authorized by the government to pay teachers, had lower absenteeism rates than other rural schools. A completion report on a World Bank project reported that regular rural schools were opened for 154 days a year, but community-managed schools operated for 180 of the 200 official days (World Bank, 2008). This outcome is encouraging, but longitudinal research in more countries is needed to establish cause-effect relationships and conditions that inhibit or promote teacher-absenteeism (Abadzi, 2009).

Another cause of instructional time loss is due to wastage of classroom time, which is technically known as ‘Time on Task’ (TOT). Ideally, students should be engaged in learning during the entire time they are in class, particularly with activities that are more conducive to long-term memory consolidation of needed material and formation of useful linkages among pieces of information (Abadzi, 2006). Schools in higher-income countries, that have trained teachers and a multitude of materials, may succeed in keeping most

students suitably engaged most of the time. It is probably impossible to have 100 percent student compliance and time use, but some systems can become fairly efficient. For example, a published longitudinal study of eight elementary schools in Chicago found that 85 percent of the daily allocated time was dedicated to instruction (Smith, 2000).

In many countries, however, time in classrooms is not well-used. The loss may be due to inadequate teacher knowledge and material resources. UNESCO reports suggest that poorly-trained teachers may not know which activities result in efficient time use or why this concept matters (Attar, 2001; Njie, 2001). In countries such as the Gambia and Burkina Faso, textbooks are often scarce and more class time may be lost writing out lessons and problems on the board (Dia, 2003). The importance of time loss involved in copying was illustrated by a comparison of instructional time in three Latin American countries: few Brazilian schools used prepared activities, so students spent significantly more time copying maths problems from the blackboard than did Chileans and Cubans. The test scores tended to reflect these differences (Carnoy, Gove & Marshall, 2004). However, it is not sufficient for students to have books: they must also know how to read and understand the texts in order to learn. In a Kenyan programme where an NGO provided textbooks to all students, instructional time in classrooms improved, but a vetted study showed that test scores remained stagnant (Glewwe, Kremer & Moulin, 1999). Students should not just be engaged in any learning activity, but should spend their time in activities that teach the prescribed curriculum. Students who do this are most

likely to score well in achievement tests, so time spent on the curriculum may be a more useful predictor of learning outcomes than engagement in any learning activity (Wang, 1998). Empirical information suggests considerable deviation in lower income countries. For example, in Ghana, a large portion of rural school teachers did not follow the prescribed weekly time-table (EARC, 2003). Various possible reasons exist, including the likelihood that students may be too far behind in the official syllabus, or that teachers have a poor sense of the time needed to teach specific topics. However, little systematic information exists regarding the amount of time schools actually spent presenting new material and progressing with the specified curriculum. Curriculum measurement methods have been complex and dependent on local standards (for example, studies of students' notebooks; Ben-Jaafar, 2006). More research is needed to develop relatively simple means of measuring distance from expected curricula coverage (Abadzi, 2009).

Countries have increased their emphasis on quality and on instructional delivery in recent years and an emerging issue is the neglect of lower scoring students. Teachers may engage the class in the required learning activities but interact with only the few students who can do the work. Many of the neglected students eventually drop out. The situation has been documented in World Bank evaluation reports (for example in Niger and Mozambique; OED, 2005; IEG 2008), and there is published information on Jamaica (Lockheed & Harris, 2005) and Albania (Sultana, 2006). A published Greek study also found that the less-knowledgeable students spent more time "off task" (Matsagouras, 1987). In

Jamaica, the teachers of the higher primary grades concentrated on the few students who could pass the school leaving examinations. Albanian teachers directed questions 4.7 times more often to the better students than the failing ones, while the latter were uninvolved and asked no questions. This phenomenon, called "hidden dropout" in Albania, illustrates the complexities involved in measuring instructional time. It is not sufficient to document that instruction is going on; the percentage of students involved in it must be also measured. Some other studies have used quick assessments of whether or not a class is engaged in instruction (for example Sultana, 2006), but the reliability of this method and its relationship to learning outcomes have not been established. To estimate the percentage of students actually involved in instruction, targeted research may be justified using more sophisticated methods, such as instruments that register students' activities (for example experience sampling methods, Yair, 2000).

Summary of the Literature Review

This chapter dealt with a variety of literature that was related to instructional time management. It became imperative to put time into perspective so the concept of time was looked at. Again, instructional time which is the main focus of this study was thoroughly looked at in tandem with allocated time, engaged time, time-on-task, academic learning time, waiting time among others. These were reviewed from the perspectives of scholars like Berliner (2009, 1987), Royelli (2006), Mermin (2005), Rowe (1994) and many others. Additionally, the historical development of instructional time was

reviewed. Other themes reviewed in this literature were school working hours and time-tables, management techniques of instructional time, working hours and time-tables of schools and co-curricula activities. Finally, aspects from previous studies on sources of instructional time loss were highlighted in this literature review. The empirical review was anchored by Abadzi (2009) as she cited the works of several other scholars from across the globe.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter of the study highlights on the methodology that is used to collect data for the study. The components of the chapter are: the Research Design, Population of the study, the Sampling Procedures, Instrumentation, Data Administration Processes including the pre-testing process and Data Analysis Procedures.

Research Design

The descriptive survey design was used for this study. This design was considered appropriate because as Denzin and Lincoln (2000) put it "survey is oriented towards the administration of the status of a given phenomenon rather than towards the isolation of causative factors" (p.120). With this study, the management of instructional time in public basic schools was assessed. The main issues involved were whether teachers taught according to the time-table, lessons and the challenges that were encountered in the teaching and learning processes.

In the views of Shaughnessy, Zechmeister and Zechmeister (2006) "surveys sample populations in order to discover the incidence and distribution of and the inter-relationships among sociological, psychological and educational

variables" (p.143). Shaughnessy, et al added another dimension that data collected through the survey method are usually responses coming from pre-determined questions, which are asked of a sample of respondents. The intention of the researcher is to generalize the findings to the total population from which the sample was taken. This study is using the survey method as it is using pre-determined questions in a questionnaire. Data is collected from a sample of teachers (297) and headteachers (41) who make up the respondents.

In addition, a descriptive survey describes and reports the way things are in their natural state. The descriptive sample survey is appropriate when a researcher attempts to describe some aspects of a population by selecting unbiased samples of individuals who are asked to complete questionnaire or give answers to interview guides or respond orally to interviews. Moreover, the design offers the researcher the opportunity to observe phenomena as they happen or exist in their natural state and report what he or she sees. It is in the light of the above features of the descriptive design, that this researcher adopted it for the study.

Even though the survey design used for this study had a lot of advantages there were a few weaknesses that it suffered. One of such weakness was the fact that respondents were made to respond to items that demanded pre-determined responses. According to Lyberg, Biemer, Collins, deLeeuw Dippo, Schwarz and Trewin (1997), this aspect of the survey design is inappropriate. In spite of this weakness, the survey design still helped to get a standardized state of instructional time management in public JHS in the study area.

Population

The population for the study consisted of all headteachers and teachers of the public Junior High Schools in the Mampong Municipality in the Ashanti region. Instructional time management is in the hands of headteachers and teachers in the classroom and they are well-placed to offer the needed information to make this study a success. Mampong Municipality has a total of 47 public JHS. The population therefore comprised 41 heads and 297 teachers. The Mampong Municipal Education Directorate was divided into six circuits, namely: Mampong Central A & B, Mampong North & South, Kofiase and Benim.

Sampling Techniques

The sample size for the study was 235 respondents. This was made of 28 headteachers and 207 teachers. Since the Mampong Municipal Education Directorate is divided into six circuits, it was decided that four circuits should be used for the main study and the remaining two for the pre-testing of instruments. Consequently, the circuits were categorized into urban and rural settings. The urban circuits were Mampong Central 'A' & 'B'; whilst Mampong North, South, Benim and Kofiase fell into the rural category. A simple random sampling technique was used to select three circuits and a circuit from the rural and urban categories in that order. In the end, Mampong Central 'A', Mampong North and South and Kofiase were selected. These four circuits had a total of 31 Junior High Schools. The 31 JHS had 28 headteachers because six schools

within the Mampong Central 'A' Circuit were headed by three heads. In effect, all the 28 headteachers were purposefully selected to be part of data collection. Also, the 31 JHS had a total of 207 teachers who were all selected purposefully to be part of the study.

The rationale for using the purposive sampling to select the 28 headteachers was based on the fact that their contribution of data collection was crucial. Also, Salant and Dillman (1994) gave impetus to the use of the purposive sampling method. They explained that purposeful sampling selects information rich cases for in depth study. The respondents in this study were teachers and headteachers who were on the field and were supposed to be operationalising the use of instructional time as rules dictate, and involving all of them gave rich information instead of selecting a part.

Instruments for Data Collection

Three instruments were used for data collection. The instruments were: questionnaire, interview guide and observational guide. The questionnaire was used to collect data from teachers; the interview guide was used in collecting data from headteachers and the observation guide was used for independent observation of the instructional processes.

The Questionnaire

A 25-item questionnaire was designed to gather data on how instructional time was managed by teachers in both the classroom and in the

school as a whole. Both close and open-ended questions were used to seek information on how teachers managed school time with special reference to instructional time in the classroom. There were also some questions which were focused on bringing out some information on activities which contribute to the mismanagement of instructional time. In sum, the items in the questionnaire were selected in such a way that they covered the personal data of respondents, their lesson notes preparation, how they used them in both the teaching and learning processes, the supervision and monitoring of teachers in the classrooms, the usage of free periods as well as the co-curricula activities which in somehow interfere with instructional time usage.

Interview Guide

The Interview Guide had 27 items made up of nine preliminary items on respondents' personal information and 18 questions covering instructional time management. With the interview guide, headteachers were asked questions that bordered on how teachers' scheme of work and their lesson notes were marked. Also, issues relating to the frequency of visits headteachers made to classrooms and the observations made regarding teachers and pupils' responses to bells/drums in terms of a change over, break and closing periods as well as the interference in teaching and learning processes were covered in the interview guide.

Observational Guide

The observational guide was designed in a form that sought information on all activities that went on in the schools and captured for the study. These included: the number of subjects taught per day, when the first period started and when it ended, the time taken for a change over of a lesson, the duration of break periods as well as the duration of the last period. Eight schools were selected randomly for the observation process. Two schools each were selected from the four circuits that were used for the study. The schools selected and the circuits they represented are displayed in Table 1.

Table 1

Observed schools

Name of Circuit	Schools Selected
Mampong Central 'A'	Saint Monica's JHS & Mensah Saahene JHS
Mampong North	Abuontem JHS & Nkwanta M/A JHS
Kofiase	Aframano JHS & Kofiase Methodist JHS
Mampong South	Bosofour M/A JHS & Nsuase Islamic JHS

The observation of the instructional time usage in the selected schools was conducted after the questionnaire had been administered. Specifically, the observation was done concurrently with the interview guide administration.

Pilot Testing of Instruments

The instruments were pilot tested within the Mampong Central B and Benim Circuits of the Mampong Municipality. A sample of 103 respondents made up of 13 headteachers and 90 teachers. All respondents were selected purposefully. The essence of the pilot test was to find out the validity and reliability of the instruments.

Data collected from the pilot testing processes were analysed manually and electronically using the Statistical Products and Services Solutions (SPSS) software. One month was used for the pilot testing data administration. Two research assistants were recruited and trained for the questionnaire administration.

Before data collection, a letter of introduction had been obtained from the Municipal Director of Education which was used to introduce the investigators to respondents in the schools. All respondents cooperated very well with the data collection process.

In the end, when a reliability test was run the results indicated that the instruments were good and there was no need to change any of the items. The results of the reliability test was $r = 0.7550$. No changes were made to the items in the questionnaire, interview guide or observation guide.

Procedure for Data Collection

After the instruments had been certified for the main data collection, the introductory letter obtained from the Municipal Directorate of Education was

photo-copied and sent to the various schools to seek permission for the data collection processes to be effected. The interviewing was done by the researcher and the questionnaires administered by the two research assistants employed. Six weeks were used for the main data administration.

The questionnaires were given out to teachers and they were given an initial period of two weeks to complete. After the two weeks had elapsed the research assistants went round to retrieve them. In the first instance, 30% of the completed questionnaires were retrieved, 10% of respondents reported that the questionnaires were missing and they were replaced whilst, 60% of respondents had not completed theirs. An additional two weeks was given after which the remaining 70% were retrieved without any excuse.

At the time the questionnaires were being administered, formalities for conducting the interviews were initiated and carried out and these went beyond one month. In the meantime, the observation process was done simultaneously as the interviews were conducted. At the end of the data collection, 200 teachers returned their questionnaires and 25 headteachers out of the 28 were reached for the interview. In all, 225 respondents took part in data collection giving a return rate of 95.8%.

Data Analysis Procedures

The information gathered were first checked for clarity of expression and accuracy. The raw data were then organized, bearing in mind the research questions for which the instruments were designed. This was the manual

analysis procedures, which included coding of the responses whereby each of them was given code numbers for easy input into the electronic software. After all the responses had been duly coded, they were keyed into the variable view of the SPSS using the coding key. Upon completion of this process, the next step was the keying of all the individual responses from the questionnaire, interview guide and observation process according to how the editing was done. When everything was over, frequency tables and charts and bars were extracted for the discussion in Chapter Four.

CHAPTER FOUR

RESULTS AND DISCUSSION

The focus of this study was the assessment of the management of instructional time in public Junior High Schools in the Asante Mampong Municipality. In view of that this chapter presents the results that emerged from the data collection process. This presentation of results is done in two main parts. The first part is devoted to the biographical information of respondents and the second part presents the main research results. At the end of the data collection, 200 teachers and 25 headteachers participated in the data collection. It must be stated that the data is primarily presented in tables and charts but few of the responses would be presented in prose particularly the responses of headteachers.

Biographical Information of Respondents

Some background information from respondents were collated. Five issues each were picked on teachers and headteachers' background information respectively. The five issues concerning teachers were their gender, age, distance travelled to school, rank in the Ghana Education Service and teaching experience. On the part of headteachers, their gender, age, teaching experience, number of years as headteachers and whether they were detached or undetached.

Gender Distribution of Respondents

The gender distribution of responses is presented in prose. Data collected for the study indicated that there were 140 (70%) male and 60 (30%) female teachers. Responses from headteachers showed that there were 15 males and 10 females. These two pieces of information show that there are more male teachers and heads than female teachers and heads.

Age Distribution of Respondents

The ages of respondents were captured and the responses given are presented in Table 2.

Table 2

Distribution of respondent by age

Age in years	Responses			
	Teachers		Headteachers	
	N	(%)	N	(%)
20 and below	5	2.5	-	-
21 – 30	96	48.0	-	-
31 – 40	54	27.0	10	40.0
41 – 50	25	12.5	10	40.0
51 or more	20	10.0	5	20.0
Total	200	100.0	25	100.0

The ages of headteachers ranged from 31 to 51 or more years and that of teachers started from 20 years to 51 and above. This was because most of the time, heads of public schools have to teach for sometime before they are appointed to head a school and the demand is that one would spent not less than five years as a teacher on the field.

Distance Teachers Used to Travel to School

Distance travel to school could influence teachers coming to school late or not coming at all especially in the rural and remote areas. In view of issue like this, it became necessary to explore the distance teachers used to travel to school on daily basis. The responses on the distance covered are presented in Table 3.

Table 3

Responses on the distance teachers travel to school

Distance range	Frequency	Percentage
Under 5 km	125	62.5
5 – 9 km	45	22.5
10 – 14 km	30	15.0
Total	200	100.0

Table 3 shows that 62.5% of teachers travel less than 5 kilometres to school. This is the most acceptable limit for teachers and pupils alike. This means that such teachers live within the communities where the schools are

located and this can facilitate their coming to school early and not absenting themselves. In the case of those who have to travel more than 5 kilometers, there is a possibility of they attending school late or not coming at all. It would even be more difficult during raining season and when the terrain is bad, travelling by foot or even by car becomes difficult and that can affect instructional time management negatively (Abadzi, 2009).

Teachers' Rank in the Ghana Education Service

As part of the measures to collate the background information of teachers, their ranks (positions) in the GES were considered important in the management of instructional time. Table 4 presents the responses given to the rank issue.

Table 4

Teacher respondents' ranks in the GES

Rank	Frequency	Percentage
Teacher	30	15.0
Assistant Superintendent	20	10.0
Superintendent	20	10.0
Senior Superintendent	40	20.0
Principal Superintendent and above	80	40.0
Total	200	100.0

It is seen from Table 4 that 15% of teachers are not ranked yet but the remaining 85% are ranked. In fact, 40% of teachers are in the higher echelons of the GES, that is they are Principal Superintendents or above. This is encouraging in the sense that such high ranking officers' teaching at the basic school levels is commendable.

Respondents' Teaching Experience

Responses on the teaching experience of both teachers and headteachers were elicited. The responses are presented in Table 5.

Table 5

Responses on the teaching experience of respondents

	Responses			
Number of years of teaching	Teachers		Headteachers	
	N	(%)	N	(%)
10 years and below	130	65.0	-	-
11 – 20 years	40	20.0	10	40.0
21 – 30 years	20	10.0	10	40.0
31 – 40 years	10	5.0	5	20.0
Total	200	100.0	25	100.0

The table indicates that 65% of teachers have had up to 10 years working experience in the teaching service. Significantly, it was seen that none of the

head teachers had served for less than 10 years and this goes to confirm an assertion made earlier that before one is appointed a headteacher that person should have taught for not less than five years. In view of that the headteachers captured in this study had taught for years ranging from 11 to 40. The implication is that they know what instructional time usage is all about, since this had been acquired over the years. In another development, 80% of headteachers indicated that they have been heads from between a year to five and the remaining 20% stated that they have served in that capacity for between 6 to 10 years. This length of time should tell how they manage instructional time in their respective schools.

A closely-related issue was whether a headteacher was detached or undetached. The results from data collection indicated that 15 were detached and 10 were undetached. The implication of being a detached or undetached is that when a headteacher is undetached he or she is supposed to teach according to the GES Regulations (2006). Specifically, the relevant portion of the regulation states that a single stream JHS with just three classes should have a maximum of five teachers which should include the headteacher and he/she is supposed to teach on full-time basis, in addition to his/her administrative functions. The regulation continued to elaborate on the other scenarios like double-stream and so forth and so on.

Presentation of Research Results

The presentation of the main results is done according to the research questions that were used to elicit responses from respondents. In all there were four research questions and that the presentation of the main data results is in four sections. What is done is that research questions are posed and their objectives stated; which shall be followed by the presentation of results that are done in tables, charts or in prose followed by discussion with relevant literature support.

Research Question One: What is the total/average time spent on actual instruction per day?

This research questions sought responses to satisfy specific objective which demanded to assess the total/average time spent on actual instruction per day in the schools. Teachers and headteachers answered a few items that were meant to elicit the appropriate responses to the issue concerning the actual instructional time spent per day.

Number of Subjects Taught by Teachers

Since the study was conducted in Junior High Schools where teachers act as subject teachers it is easy determining the periods and actual time per day. However, it was likely that some of the teachers teach more than a subject and that would influence the number of periods they handle in a week. Responses elicited on the number of subjects indicated that 105 (52.5%) teach only one

subject and 95 (47.5%) teach two subjects. Since the number of subjects taught influence the periods handled in a week, responses elicited were to that effect and the responses are presented in Table 6. For a detailed and comprehensive time table for a JHS refer to Appendix E. At Appendix E, the actual time-table for a four stream JHS has been displayed, showing all the subjects and activities conducted in the school during the normal instructional hours. The responses presented in Table 6 are a summary of what is in Appendix E and it is seen that the number of periods taught per class in a day is 10.

Table 6

Number of periods taught in a week by teachers

Numbers of periods per week	Frequency	Percentage
24 – 26	117	58.5
27 – 29	49	24.5
30 or more	34	17.0
Total	200	100.0

Table 6 shows that 58.5% of teachers indicated that they taught between 24 to 26 periods a week. This is against the background that the minimum number of periods a teacher can teach per week is 24 periods which translate into 14 hours a week. Observation conducted on the field showed that core subjects such as: English Language, Mathematics and Science attract six periods a week, whilst the other subjects such as: ICT, French, Ghanaian Language and Religious and Moral Education, attract four periods a week. The implication is

that if a teacher teaches in a double-stream school and he/she handles only a core subject for all the levels he/she would be teaching for a maximum period of 36 per week. However, at the JHS level, most teachers are required to teach two subjects and that is what brings the relativities in the number of periods per week. The information that had been displayed in Table 6 is largely confirmed by the observation carried out in some of the schools within the Mampong Municipality. It was seen that no teacher teaches for less than the minimum number of periods per week. The most important thing is that the stipulated instructional time would be used to ensure that no time is lost as was revealed by studies reviewed in the literature.

Field observation indicated that each class goes through eight periods of 35 minutes every day with two breaks in between. The first break is at 9.30am to 10.00am and the second is 12.15pm to 12.30pm.

Research Question Two: What factors contribute to ineffective use of instructional time?

Effective instructional time usage had been of much concern to educational policy-makers, managers and supervisors. In view of this, research question two was formulated to elicit answers that could help to identify the factors which contribute to the ineffective use of instructional time in public Junior High Schools in the Mampong Municipality.

The first factor that was looked at was how lesson notes are planned. Data on this issue is presented in Table 7.

Table 7

Teacher responses on how often lesson notes are planned

Responses	Frequency	Percentage
On daily basis	80	40.0
On weekly basis	120	60.0
Total	200	100.0

In Table 7 it is seen that 40% of respondents indicated teachers planned lesson notes on daily basis and 60% intimated that they planned theirs on weekly basis. Whichever way lesson notes were planned by teachers, it did not matter much, but the effectiveness and efficiency by which the lesson plan or notes were executed was important. In other words, the ingredients for lesson plans must be present to make them proper and appropriate for teaching. For example, to ensure that lesson plans are properly planned, times had to be allotted to all activities that are to be carried out by the schools and the classes.

In a follow up to how often lesson notes are prepared, in the teachers' questionnaire, they were asked whether they assigned time to specific activities during the lesson notes preparation. The responses they gave are displayed in Table 8.

Table 8

Responses on whether time was allotted to specific activities in teachers' lesson plans

Responses	Frequency	Percentage
Yes	140	70.0
No	60	30.0
Total	200	100.0

The responses from Table 8 indicate that 70% of teachers answered in the affirmative and 30% in the negative. The 30% of teachers who numbered 60 indicated they planned their lesson notes without assigning time to tasks to be performed during lessons. This is not good enough because Abadzi (2009), Cerdan-Infantes and Vermeersch (2007) and Bray (2006) variously admonished that teachers should allot times to tasks to be performed in the lesson plan. Specifically, Cerdan-Infantes and Vermeersch (2007) urged school heads and their teachers to engage themselves in planning all the school activities and apportion time to each of them.

The next important issue that was considered in the planning of lesson notes (or lesson plans or scheme of work) was the materials needed to be used. Teachers were asked the materials they used in the planning of lesson notes and the responses they gave are presented in Table 9.

Table 9

Responses on materials used to prepare lesson notes

The materials	Frequency	Percentage
Syllabuses only	25	12.5
Textbooks only	5	2.5
Syllabus & Textbooks combined	170	85.0
Total	200	100.0

It is clear from Table 9 that teachers used two main materials in the preparation of lesson notes. In the first instance, 12.5% of teachers indicate that they used only the syllabus in the preparation of lesson notes whilst 2.5% used only textbooks for that purpose. In deed, it is always good to use a variety of resources for the planning of lesson notes. Primarily, teachers are to use the syllabus provided by GES (Abadzi, 2009). On that basis, teachers who used the syllabus were perfectly right but those who chose to use all the resources, including prescribed textbooks, and other relevant sources, did better.

To ensure that teachers do not only prepare lesson notes, headteachers were asked whether teachers' lesson notes were vetted as required by GES. The overwhelming response was 'Yes'. To cross-check this, the observation conducted confirmed what headteachers and teachers said about the vetting of lesson notes. The observation was done before the interviews were conducted and so the results of the interviews were compared with the observation outcome.

Since the vetting of lesson notes is part of the supervisory duties of headteachers and an essential component of the instructional management process, teachers as well as headteachers were asked the days on which the vetting of lesson notes were undertaken. Teachers' responses to this issue are presented in Table 10.

Table 10

Teacher responses on the days on which lesson notes are vetted

Vetting Days	Frequency	Percentage
Mondays	180	90.0
Tuesdays	6	3.0
Wednesdays	4	2.0
Thursdays	4	2.0
Fridays	6	3.0
Total	200	100.0

Table 10 clearly shows that majority of teachers indicated that their lesson notes are vetted on Mondays. It was on few occasions that some of the teachers had their headteachers vetting their lesson notes on other days. That has been displayed on the table. In actual fact, what is important is the vetting of lessons notes in the course of the week because teachers are supposed to teach with prepared lesson notes. The responses from headteachers largely confirmed the Mondays and to lesser extent the Tuesdays, none of the headteachers

selected for the study talked about Wednesdays, Thursdays or Fridays but that remained the prerogative of the headteacher.

Apart from the vetting of lesson notes, headteachers were asked how often they checked through pupils' exercise books whether teachers gave the required exercises or not. The unanimous response was 'regularly', however, explanations were given to that. Headteachers explained that exercise was conducted once or twice a term depending on the workload on them. In the same vain, headteachers were asked whether circuit supervisors and other education officials visited the schools and the answer was in the affirmative. Circuit supervisors are required to regularly visit schools under their command. These visits are for the purposes of cross-checking whether lesson notes were prepared by teachers, whether teachers as well as headteachers attended school and performed their duties. More importantly, circuit supervisors visit the schools with the view to check whether headteachers did their work as internal supervisors and check the overall instructional management processes in the schools (GES Regulations, 2006).

Apart from the visits by circuit supervisors, headteachers as internal supervisors are required to visit the classroom occasionally to observe teachers' delivery skills among others. To this end, headteachers were asked how often they visited the classroom to observe the teaching-learning process. The responses showed 40% of heads indicating very often and 60% saying four times a term. What is important in all these visits is that it will prompt teachers to be alert and stick to the standards in lesson delivery. In a follow-up,

headteachers were asked what they looked for during the occasional visits they undertook to the classroom and they responded that they checked teachers' mastery of the subjects taught, class control, use of TLMs, pupils' participation in lesson delivery and how pupils' contributions are reinforced among other skills.

The preparation of lesson notes alone would not achieve an instructional objective but rather the operationalisation of the scheme of work prepared. In view of this, the various data collection processes were used to check for the actual usage of planned lesson notes. First, teachers were asked if they were able to follow the lesson plans drawn. Figure 1 presents the responses to that effect.

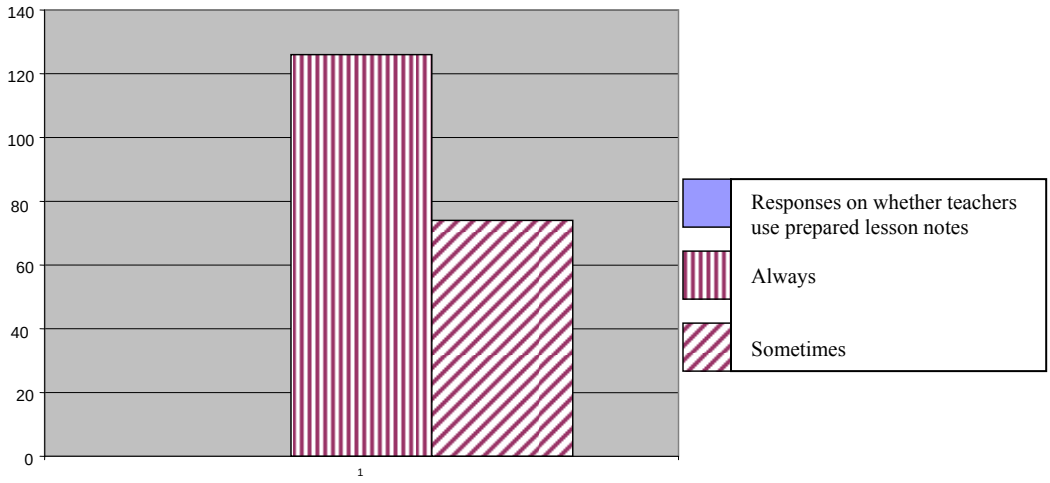

Figure 1: Responses on whether teachers use prepared lesson notes in teaching

Figure 1 shows that majority of teachers numbering 126 indicated that they were able to teach their lessons according to the prepared lesson plans. However, 74 teacher respondents were true when they stated that they are not able to teach according to prepared notes due to certain pertinent problems. They explained that sometimes, pupils' assimilation rate is low and they are

forced to re-teach that topic before they can proceed to the next topic in the syllabus. This is more so because some topics are precursors to others and one cannot jump them unless pupils have shown clear understanding of those concepts.

The responses of headteachers largely confirmed the responses of teachers in the sense that 80% of headteachers indicated that some teachers are able to teach according to planned scheme of work and the remaining 20% disagreed with that view point. During the observation process, the trend as has been seen from teachers and heads were confirmed. In fact, the preparation and usage of lesson plans are central to effective management of instructional time throughout the day. Of course, time tables have to be drawn so that teachers can use and teach as and when they are to do so. In buttressing the points that had been made earlier on, Tamakloe, Atta and Amedahe 1996) noted that teaching as a special component in the education delivery process demands serious preparation on the part of teachers. Thus, a well-taught lesson plan portrays quality and expertise, so every successful teacher should plan his/her scheme of work in advance; break the syllabus into manageable activities and arrange them sequentially into topics and that should be taught in relation to other topics at the appropriate time.

Research Questions Three and Four: What challenges do headteachers and teachers face in the management of instructional time?

The management of instructional time at the JHS level lies within the purview of headteachers. In fact, they have the responsibility to ensure that

instructional processes go on unhindered in order to achieve the ultimate results of offering quality education to pupils. In the light of this, research questions three and four which have relationship with specific objective three and four were formulated to explore the challenges headteachers and teachers face in the management of instructional time. As had been the trend in this study, some responses were elicited from teachers, headteachers and an observation was done to complete the data collection process. Various responses had been collated to answer the questions posed to answer the challenges headteachers and teachers face in the management of instructional time in public JHS in the Mampong municipality.

First and foremost, it should be underscored that the daily routine in public JHS starts with the tidying up of the school environment before pupils are summoned to assembly by the tolling of a bell at 7.00am. At any point in time a teacher is assigned to be on duty to supervise the morning rituals of classrooms and office cleaning by pupils and conducting assembly proceedings before the first period commences at 7.30am. With these in mind, headteachers were asked if teachers and pupils responded to bells as promptly as expected. Headteacher responses on whether teachers responded promptly to bells were 80% and 20% in the affirmative and negative respectively. This meant that some teachers did not respond to bells as promptly as required. The explanation given was that teachers who deviated from the norm in so far as responding to bells for morning or closing assembly, and other school gatherings, were that teachers were mostly engaged in personal conversation, which prevented them from

acting with dispatch. This scenario was confirmed during the observation process.

In support of the finding above, Abadzi (2009), citing the works of others, in India, a study found out that some schools surveyed indicated that some teachers were always talking to other teachers, sitting/standing outside the classroom. This was seen to contribute to instructional time loss (De & Dreze, 1999). The implication of the few teachers not helping with the morning routine formalities or responding to bells late could contribute to the loss of some amount of instructional time particularly, during the first periods. On the other hand, all headteachers indicated that pupils responded promptly to bells at all times.

The Challenge of Teacher Absenteeism

One other challenge that headteachers faced in the management of instructional time had to do with when a teacher was absent from school. At the JHS level, teachers are required to do subject teaching and therefore their absence would not be too difficult to manage, however, such absences have to be managed by the head. Teachers and headteachers contributed data to this issue and their responses are presented in Table 9.

Table 11

Responses on how absenting teachers' classes are managed

Strategies used	Responses			
	Teachers		Headteachers	
	N	%	N	%
Giving of class exercises in advance	100	50.0	-	-
Giving of personal research assignment	50	25.0	5	20.0
Group Studies	30	15.0	4	16.0
Teachers with no teaching assignments are tasked to fill the vacuum	20	10.0	16	64.0
Total	200	100.0	25	100.0

Table 11 shows that 50% of teacher respondents indicated that the foremost strategy used to make up for an absenting teacher was that a class exercise is given in advance. They explained that the assignments given are mostly based on the last topic treated which is a source of motivation to carry out the assignment with all the seriousness it deserves. Similarly, 25% of teachers and 20% of headteachers agreed that absenting teachers gave personal research assignments to pupils to occupy them when it came to that subject.

They indicated that this action helps pupils to use discovery learning techniques to improve upon their understanding of concepts. Furthermore, it was explained that this research was mostly undertaken in the improvised school

library because that was where reference sources were available for consultation.

In addition to the above strategies, Table 11 shows that 15% of teacher and 16% of headteacher respondents indicated that some times, absentee teachers gave group assignments that were based on general discussion among pupils. They explained that these are part of the learning strategies pupils are introduced to when teachers are absent or unavailable.

Lastly, Table 11 shows that few teachers (10.0%) and the majority of headteachers (64.0%) indicated that teachers with no teaching assignments are asked to handle classes that have no teachers. In the view of teachers, almost all the times teachers are busy and the mere fact that they may not be teaching would not mean that they do not have any assignments to undertake. Headteachers agreed with the views expressed by teachers but explained that if teachers are not assigned to the classes without teachers in spite of the assignments given, pupils would not do them as expected and it is therefore imperative to supervise the pupils in the carrying out of the assignments given.

All that had been discussed under Table 11 became imperative because teacher-absenteeism had been seen to be a greater contributor to instructional time loss. World Bank staff, particularly, Patrinos and Kagia (2007), Chaudhury, Hammer, Kremer, Mularidharan and Rogers (2004b) had conducted several studies on the effects of teacher-absenteeism on instructional time usage and the results had not been good. It is therefore prudent that the headteachers took local decisions to mitigate the effects of absenting teachers on instructional time

usage. In this light, measures such as those already discussed are helpful and useful.

The Challenge of Staff Meetings

Staff meetings are another activity of the school that could have negative effect on the use of instructional time. The first item to explore this challenge dealt with whether staff meetings were held during regular instructional hours. Teacher responses to this issue are presented in Table 12.

Table 12 shows that 20.0% of teachers indicated 'Yes' that staff meetings are held in their schools during regular instructional time. Teaching and learning are done according to a well-planned time and everything should be factored into the time table of the school. If it is found that some schools conduct school business outside the regular time table, it would amount to instructional time loss.

Table 12

Teacher responses on whether staff meetings were held during regular instructional time

Responses	Frequency	Percentage
Yes	40	20.0
No	55	27.5
Sometimes	105	52.5
Total	200	100.0

This response can be linked with 52.5% of teachers who indicated that having staff meeting during regular instructional hours happened sometimes. Responses from 30% of headteachers confirmed that staff meetings were held sometimes during regular instructional hours. Putting all these together, headteachers and teachers are sometimes challenged to use part of the regular instructional hours to take decisions during staff meetings. This will not be a big challenge if pupils were organised well by giving exercises to do whilst the meetings were going on as in the case of when teachers were absent from school.

How Teachers Manage their Periods

The responses in this section are given by teachers only because the intention was known on how they managed their free periods as subject teachers who do not teach all the time. It should also be noted that some of the teachers perform other roles such as: Form Teacher, House Teacher, PTA Secretary, Staff Secretary, School Club Teacher, Sports Teacher. Each of these non-teaching roles takes some amount of time to discharge and it is considered a challenge to the teachers as major players in the instructional time management process. The responses teachers gave concerning what they do during free periods are presented in Table 13.

Table 13

Teacher responses on how free periods are managed

Responses	Frequency	Percentage
Teaching related activities (e.g. marking of examination papers, preparing lesson notes)	165	82.5
Administrative activities	15	7.5
Personal activities	20	10.0
Total	200	100.0

Table 13 shows that 82.5% of teachers indicated that they used their free periods to undertake teaching-related activities. The teaching related activities comprise marking of class exercises or examination papers and preparing of lesson notes. Also, 7.5% of teachers used their free periods on administrative duties such as marking of form registers, drawing programmes for sporting activities and filling of continuous assessment records. Finally, Table 13 shows that 10.0% of teachers used the free periods for their personal activities. They explained that they are doing distance education programmes and some of these free periods are used to study modules and even do assignments given to them. As a matter of fact, teachers are not supposed to use school periods to do their personal activities but they have indicated that they did that contrary to the rules and regulations that govern instructional time usage in basic schools. This implies that headteachers do not supervise their teachers well.

In order to verify the responses of teachers on the issue under discussion, headteachers were also asked what teachers did with their free periods. The responses showed that teachers marked exercises, prepared lesson notes or did research from text books and many other related activities such as those given by teachers in Table 13.

An issue that is closely-linked with the management of free periods is the issue of headteachers visiting classrooms or staff rooms to see whether teachers are present and doing what they are required to do. Towards this end, teachers gave responses to that effect, which are presented in Table 14. In the first instance, headteachers indicated that they visited the classroom three to four times a term. Emergency visits were undertaken as and when it became necessary.

Table 14

The frequency at which headteachers visited classrooms for observation

How often	Frequency	Percentage
Always	20	10.0
Often	160	80.0
Seldom	20	10.0
Total	200	100.0

On top of it all, Table 14 represents the responses of teachers on how often headteachers undertook visits to the classroom and observed how lessons

were delivered. The responses shown in Table 14 confirmed what headteachers said. It is seen that only 10% of teachers showed that headteachers hardly visited the classrooms for observation and coaching. Visitation to classroom and supervision of teachers generally are core issues in the instructional time management process. Whatever the case was, headteachers paid visits to classroom but it depended on the situation on the ground. Table 14 shows that 10% of teachers revealed that their headteachers visited them all the time but it did not quite confirm headteachers' responses. The most important issue is if headteachers are not able to visit teachers as often as is required teachers may not perform to satisfaction.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter of the study deals with the summary and summary of findings. Also, this embodies conclusions drawn from the study, recommendations made from the findings and areas suggested to be considered for further research.

Summary

The focus of the study was concerned with investigating the utilisation of instructional time in selected Junior High Schools in Mampong Municipality. In view of this, the need for effective and efficient utilisation of instructional time were looked at in the background to the study. Specifically, activities that are carried out on daily basis in the schools were outlined according to the scheduled times and periods. Besides that the issue of single stream and double stream came up for mention and how the headteachers of these schools were to discharge their duties as administrators, supervisors and sometimes subject teachers with teaching responsibilities. The statement of the problem focused on the issues that factored into instructional time loss and this gave the impetus for the study. Consequently, the purpose of the study was concerned with two issues, that is, how instructional time was managed and the challenges

associated with its management. Following this purpose, four research questions were formulated and used to guide data collection for the study. Furthermore, the benefits that would accrue from the findings of the study were discussed under the significance of the study. The scope of the data collection was also catered for under delimitation and limitations that could impact on the findings of the study were dealt with accordingly.

A literature review to put the study into perspective was organised under Chapter Two. Among the topics used to review in relation to the instructional time usage were conceptualizing time whereby time was looked from differential perspectives. Other topics dealt with were the concept of instructional time, historical development of time, school working hours and time tables, management techniques of instructional time, co-curricula activities, lesson planning as well as instructional time management and pupils' achievement.

Additionally, the methodology of the study was developed under the relevant sections upon which data collection, analysis and presentation were discussed. These sections included the research design, population for the study, sampling techniques used in selecting respondents for the study, instruments used for data collection and how the instruments were pre-tested and validated. Also, the main data collection procedures and data analysis were vividly described in the methodology.

Towards the end of the study, the presentation and discussion of the results were catered for under Chapter Four. This chapter detailed the format for

presenting the findings, discussions and analysis of the relevant portions according to the purpose of the study. Mainly, frequency tables and percentages were used for the presentation of the results, however, few figures were equally introduced. In the end, Chapter Five summed up the work as described above with the summary, conclusions and recommendations.

Summary of Findings

The findings of the study are presented according to the purpose of the study. The purpose of the study had two objectives which were: how instructional time was managed and the challenges that confronted the instructional process.

1. Results from how instructional time was managed in Mampong Municipality showed that:

a. There were more single subject teachers than teachers who handled two subjects,

b. The minimum teaching periods per week was 24 periods and the maximum was 36 periods.

c. There were eight periods per day which began from 7.30 am to 1.40 pm.

2. It was seen that preparation of lesson plans constituted a major part of the instructional time management in the schools; lesson plans were inspected mainly on Mondays; most teachers were able to teach according to the prepared lesson plans.

3. On the challenges that confronted the instructional time usage in the basic schools, it was found out that:

a. Most teachers did not respond to bells promptly,

b. There were challenges of managing classes of absentee teachers,

c. Supervision of teachers during their free periods was probematic,

d. Organising of staff meetings during normal instructional hours and

Conclusions

The results of the study had demonstrated that management of instructional time in the school system is very crucial in the educational delivery processes. It was seen that preparation of lesson plans played central role in the instructional management process. Again, it was revealed that most teachers were able to use the prepared lesson notes during the instructional process. In view of the importance attached to the usage of lesson plans in the instructional process, headteachers mostly inspected them on Mondays.

Again, it was seen that teachers were required to teach for a minimum of 24 periods and a maximum of 36. On daily basis, eight periods of 35 minutes per period was used to manage the instructional process. Subjects that are designated as core were assigned six periods a week. When teachers are not teaching because they are subject teachers, they used the free periods to mark exercises or made further research from textbooks. On the whole, the instructional process was managed well but some challenges were encountered. Some of those challenges were having meeting during the normal instructional

periods, managing absentee teachers' periods. Headteachers also had problems supervising teachers and pupils. In spite of the few challenges outlined, the usage of the instructional time is well in place. However, every effort must be made to straighten the rough edges in the management of instructional time in basic schools.

Recommendations

The following recommendations are made from the findings, particularly, those from the challenges:

1. Teachers should endeavour to respond to bells promptly so that no time will be wasted during the change from one lesson to another.
2. Headteachers should make advance plans to utilize vacant periods during a teacher's absence so as to prevent hasty arrangements towards that direction.
3. The schools should make arrangements to ensure that teachers' free periods are utilized judiciously.
4. Headteachers of schools that organized staff meetings during normal instructional hours should find alternative periods for that purpose.
5. Lastly, headteachers should make conscious efforts to visit teachers in the classrooms to observe their teachings from time to time to ensure that standards are met.

Suggested areas for further research

The following areas are suggested to be considered by prospective researchers for further research:

1. An evaluation of how instructional time is utilised in primary schools in the other districts other than Mampong Municipality.
2. Assessment of teachers' usage of instructional time in senior high schools.
3. A comparative study of instructional time usage in basic schools and the academic performance of pupils of primary schools in Mampong Muncipality.

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APPENDICES

APPENDIX A

UNIVERSITY OF CAPE COAST

FACULTY OF EDUCATION

INSTITUTE FOR EDUCATIONAL PLANNING AND ADMINISTRATION

Questionnaire for Teachers

Dear Sir/Madam,

This is a research project being undertaken by a post-graduate student of the Institute for Educational Planning and Administration, University of Cape Coast. The objective is to find out how Instructional Time is managed in the public Junior High Schools in the Asante Mampong Municipility. You are kindly requested to provide frank answers to the items in the questionnaire. The information provided will be treated as confidential and your identity as well as your school would be protected.

Thank you.

Please indicate by means of ticking (√), the response(s) that most apply to you where responses have been provided.

Section A - Personal Data of Respondents

(1) Sex

a. Male [ ]

b. Female [ ]

(2) Age

a. 20 years and below [ ]

b. 21 – 30 [ ]

c. 31 – 40 [ ]

d. 41 – 50 [ ]

e. 51 and above [ ]

(3) What is the distance in kilometers between your residence and school?

a. Under 5 km [ ]

b. 5 – 9 km [ ]

c. 10 – 14 km [ ]

d. 27 – 29 km [ ]

e. 30 and above [ ]

(4) Rank

a. Teacher [ ]

b. Asst. Superintendent [ ]

c. Superintendent [ ]

d. Senior Superintendent [ ]

e. Principal Superintendent and above [ ]

f. Others, state: ……

(5) Teaching Experience

a. 10 years and below [ ]

b. 11 - 20 years [ ]

c. 21 - 30 years [ ]

d. 31 - 40 years [ ]

(6) Number of subject(s) taught

a. One [ ]

b. Two [ ]

c. Three [ ]

(7) Number of periods taught in a week

a. 18 - 20 [ ]

b. 21 - 23 [ ]

c. 24 – 26 [ ]

d. 27 – 29 [ ]

e. 30 and above [ ]

Section B: Instructional Time Usage

(8) How do you plan your lesson notes?

a. On daily basis [ ]

b. On weekly basis [ ]

(9) Do you assign time to be spent on each of the activities of the lesson notes?

a. Yes [ ]

b. No [ ]

(10) What do you use to plan your lesson notes?

a. Syllabuses [ ]

b. Textbooks [ ]

c. Teachers own choice [ ]

d. A and B [ ]

e. A, B and C [ ]

(11) When do you normally submit your lesson notes for vetting?

a. Mondays [ ]

b. Tuesdays [ ]

c. Wednesdays [ ]

d. Thursdays [ ]

e. Fridays [ ]

(12) Do you always follow your lesson plan during teaching?

a. Always [ ]

b. Sometimes [ ]

c. Not at all [ ]

(13) Give two reasons why you do not always follow your lesson plan if your answer to question 12 was (b) or (c)

……

……

……

……

(14) Are you able to complete your lesson within the time scheduled on the time table?

a. Yes [ ]

b. No [ ]

(15) If your response to item 14 was 'No' give reasons.

……

……

……

Factors that influence instructional time usage

(16) Which of the following administrative duties do you perform?

a. Teacher on duty [ ]

b. Form teacher [ ]

c. Assistant head teacher [ ]

d. House teacher [ ]

e. Any other (specify) [ ]

(17) Which of these other responsibilities are you assigned to?

a. P.T.A. secretary [ ]

b. Sports teacher [ ]

c. Staff secretary [ ]

d. Health teacher [ ]

e. School club teacher [ ]

(18) How many hours on the average per week do you spend on all activities mentioned in questions 16 and 17 above.

(19) Do you hold staff or other meetings during regular instructional hours?

a. Yes [ ]

b. No [ ]

c. Sometimes [ ]

(20) What do you do during your free periods?

a. Teaching related activities (e.g. marking of examination papers, preparing lesson notes) [ ]

b. Administrative activities [ ]

c. Personal activities [ ]

d. Any other (specify):

(21) What plans do you draw for your class(es) any time you are to be absent from school?

a. Give class exercises [ ]

b. Give personal research assignment [ ]

d. Any other (specify): ……

(22) In this school when a teacher is absent what do the pupils do?

(23) How often does the headteacher visit teachers' classrooms for observation and coaching?

a. Always [ ]

b. Very often [ ]

c. Often [ ]

d. Seldom [ ]

e. Not at all [ ]

(24) How do teachers in this school respond to bells?

……..

……..

(25) How do pupils respond to bells?

…….

…….

APPENDIX B

INTERVIEW GUIDE FOR HEADTEACHERS

i. School: ……..

ii. Location of School - Rural [ ] Urban [ ]

iii. Sex: Male [ ] Female [ ]

iv. Age: …….

v. Teaching Experience ……....

vi. Number of years as a headteacher .....

vii. Are you the headteacher for both Primary and JSS? .....

viii. Are you a detached head? .....

ix. How many periods a week do you teach if you are not detached?.....

Main research items

(1). Do teachers always respond promptly to the bell?

a. Yes [ ]

b. No [ ]

(2). If they do not what accounts for teachers not responding promptly to the Bell sound?

.....

.....

(3) Do pupils always respond promptly to the bell?

Yes [ ]

No [ ]

(4) If they do not what accounts for pupils not responding promptly to the bell?

.....

... ……

(5) Are Teachers' lesson notes vetted promptly?

Yes [ ]

No [ ]

(6) When do you vet teachers' lesson notes?

.....

(7) How often do you check pupils' exercise books?

.....

(8) How often do you visit teachers' classrooms for observation/coaching?

.....

... ……

(9) What do you look for during your visit?

.....

(10) Do the circuit supervisors and other officers often pay working visits to your?

.....

(11) Do teachers always follow their lesson plans whilst teaching?

.....

... ……

(12) How is a class managed when a teacher is absent from the school?

……

……

(13) What do teachers do with their free periods?

.....

.....

(14) When are co-curricula activities of the school held?

.....

(15) How often do you hold staff meetings in your school?

.....

(16) Are staff meetings held during class hours?

.....

(17) How often does staff attend other meetings related to school?

.....

(18) What time of the day are these meetings held?

.....

.....

.....

.....

.....

.....

.....

.....

APPENDIX C

OBSERVATION GUIDE

These were the observation check list that guided me during the observation period of the study.

1. Whether or not the time for the conduct of assembly was used as expected?
2. Was the time for registration used as scheduled?
3. Were both teachers and pupils always ready in their various classrooms to begin in earnest at exactly 7.30 am?
4. Was the period for the first break observed as such?
5. Do both teachers and pupils adhere strictly to the time scheduled for the second break?
6. Did classes end as planned on the time-table?
7. How were Teaching/Learning materials (T/LMs) used effectively in lesson delivery?
8. Whether teachers taught for the stipulated 35 minutes per period/70 minutes for a double period?
9. How do teachers used their leisure time in the school?
10. How were absentee teachers' classes managed?
11. Did teachers use their scheme of work in lesson delivery?

APPENDIX D

OBSERVATION CHECK LIST

These were the observation check list that guided me during the observation period of the study.

1. Whether or not the time for the conduct of the assembly was used as expected?
2. Was the time for registration used as scheduled?
3. Were both teachers and pupils always ready in their various classrooms to begin in earnest at exactly 7:30 a.m.?
4. Was the period for the first break observed as such?
5. Do both teachers and pupils adhere strictly to the time scheduled for the second break?
6. Did classes end as planned on the time-table?
7. How were Teaching/Learning Materials (T/LMs) used effectively in lesson delivery?
8. Whether teachers taught for the stipulated 35 minutes per period/70 minutes for a double period?
9. How do teachers use their leisure time in the school?
10. How were absentee teachers' classes managed?
11. Did teachers use their scheme of work in lesson delivery?

APPENDIX E

AN ACTUAL TIME-TABLE FOR A FOUR-STREAM PUBLIC JUNIOR HIGH SCHOOL

DAY S NO.		1	2	3	4	9:30-10:00am	5	6	7	8	12:00 12:40pm	9	10
TIME:		7:30-8:00am	8:00-8:30am	8:30-9:00am	9:00-9:30am		10:00-10:30am	10:30-11:00am	11:00-11:30am	11:30-12:00noon		12:40-1:10pm	1:10-1:40pm
CLASS													
MONDAY	1A	MATHS		SOCIAL STUDIES		BREAK	GHAN. LANGUAGE		B D T (P T S)		BREAK	I C T	
	1B	ENGLISH		BDT(PVS)			INT. SCIENCE		R M E			FRENCH	
	1C	BDT(PTS)		MATHS			FRENCH		LIBRARY			R M E	
	1D	FRENCH		ENGLISH			MATHS		GHAN. LANGUAGE			INT. SCIENCE	
	2A	MATHS		RME			I C T		ENGL.ISH			B D T (CATERING)	
	2B	SOCIAL		INT. SCIENCE			MATHS		R M E			B D T (TECHNICAL)	
	2C	INT. SCIENCE		GHAN. LANGUAGE			B D T (CATERING)		MATHS			SOCIAL STUDIES	
	2D	RME		MATHS			B D T (TECHNICAL)		FREE PERIOD			INT. SCIENCE	
	3A	ENGLISH		I.C.T			GHAN. LANGUAGE		AGRIC.			SOCIAL STUDIES	
	3B	FRENCH		PTS			ENGLISH		GEN. SCIENCE			GHAN. LANGUAGE	
	3C	GEN. SCIENCE		ENGLISH			SOCIAL STUDIES		FRENCH			MATHS	
	3D	MATHS		PVS			P T S		I C T			AGRIC.	
TUE	1A	GHAN. LANGUAGE		ICT	BDT(PVS)		ENGLISH		INT. SCIENCE			FRENCH	
	1B	MATHS		ENGLISH			FRENCH		B D T (P V S)			GHAN.	

								LANGUAGE
	1C	ENGLISH	MATHS		B D T (P V S)	R M E I C T		I C T
	1D	P E	INT. SCIENCE		LIBRARY	I C T B D T (P V S)		B D T (P V S)
	2A	FREE PERIOD	FRENCH		SOCIAL STUDIES	GHAN. LANGUAGE		B D T (CATERING)
	2B	MATHS	GHAN. LANGUAGE		INT. SCIENCE	ENGLISH		B D T (TECHNICAL)
	2C	INT. SCIENCE	MATHS		ENGLISH	R M E		SOCIAL STUDIES
	2D	ENGLISH	SOCIAL STUDIES		R M E	INT. SCIENCE		MATHS
	3A	GEN. SCIENCE	P T S		MATHS	FRENCH		AGRIC.
	3B	I C T	AGRIC.		R M E	GEN. SCIENCE		MATHS
	3C	FRENCH	R M E		P V S	P T S		SOCIAL STUDIES
	3D	ENGLISH	MATHS		SOCIAL STUDIES	R M E		FRENCH
WEDNESDAY	1A	MATHS	B D T (P V S)	**B R E A K**	INT. SCIENCE	ENGLISH	**B R E A K**	B D T (P V S)
	1B	INT. SCIENCE	I C T		I C T B D T (P T S)	MATHS		SOCIAL STUDIES
	1C	GHAN. LANGUAGE	ENGLISH		FRENCH	SOCIAL STUDIES		INT. SCIENCE
	1D	ENGLISH	B D T (P T S)		MATHS	FRENCH		R M E
	2A	FRENCH	ENGLISH		SOCIAL STUDIES	B D T (CATERING)		INT. SCIENCE
	2B	SOCIAL STUDIES	INT. SCIENCE		ENGLISH	B D T (TECHNICAL)		LIBRARY
	2C	MATHS	R M E		B D T (CATERING)	INT. SCIENCE		ENGLISH
	2D	ENGLISH	MATHS		B D T (TECHNICAL)	GHAN. LANGUAGE		FRENCH
	3A	P T S	MATHS			ENGLISH		R M E
	3B	R M E	GHAN.		MATHS	SOCIAL STUDIES		P V S

			LANGUAGE					
	3C	MATHS	GEN. SCIENCE		ENGLISH	GHAN. LANGUAGE		AGRIC.
	3D	GEN. SCIENCE	ENGLISH		P V S	AGRIC.		GHAN. LANGUAGE
THURSDAY	1A	ENGLISH	INT. SCIENCE		MATHS	FRENCH		R M E
	1B	SOCIAL STUDIES	B D T (P V S)		ENGLISH	P E		INT.SCIENCE
	1C	MATHS	SOCIAL STUDIES		B D T (P V S)	INT. SCIENCE		B D T / P E
	1D	INT. SCIENCE	MATHS		I C T	SOCIAL STUDIES		ENGLISH
	2A	MATHS	GHAN. LANGUAGE		R M E	INT. SCIENCE		LIBRARY
	2B	ENGLISH	MATHS		FRENCH	R M E		FREE PERIOD
	2C	I C T	ENGLISH		GHAN. LANGUAGE	B D T (CATERING) / B D T		FRENCH
	2D	FRENCH	INT. SCIENCE		ENGLISH	B D T (TECHNICAL) / B D T		I C T
	3A	GEN. SCIENCE	ENGLISH		GHAN. LANGUAGE	P V S		R M E / R M E
	3B	ENGLISH	AGRIC.		SOCIAL STUDIES	MATHS		P T S
	3C	AGRIC.	MATHS		P T S	GHAN. LANGUAGE		P V S / P V S
	3D	FRENCH	P T S		ENGLISH	GEN. SCIENCE		MATHS

FRIDAY	1A	**WORSHIP**	R M E	**B R E A K**	P. E	LIBRARY	**B R E A K**	SOCIAL STUDIES	
	1B		MATHS		GHAN. LANGUAGE	R M E		LIBRARY	
	1C		INT. SCIENCE		ENGLISH	LIBRARY		GHAN. LANGUAGE	
	1D		SOCIAL STUDIES		GHAN. LANGUAGE	B D T / P V		R M E	R M E

							S		
	2A		MATHS		ENGLISH	B D T (CATERING) B D T		INT. SCIENCE	
	2B		GHA. LANGUAGE		FRENCH	B D T (TECHNICAL) B D T		I C T	
	2C		FRENCH		LIBRARY	FREE PRIOD		B D T (CATERING)	
	2D		LIBRARY		GHAN. LANGUAGE	SOCIAL STUDIES		B D T (TECHNICAL)	
	3A		FRENCH		P V S	MATHS			
	3B		P V S		ENGLISH	FRENCH		**EXTRA - EXTRA**	
	3C		ENGLISH		R M E R M E	I C T		**STARTS FROM**	
	3D		R M E	R M E	SOCIAL STUDIES	GHAN. LANGUAGE		**THIS PRIOD.**	