

## Assessment of Teaching Learning Resources Currently in use in Geography in Senior High School

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### **Abstract**

*Attempts have been made by both individuals and groups about assessment of non-projected aids currently in use in teaching geography in college and university education. The study was conducted in Cape Coast in the Cape Coast Metropolis. A total of one hundred and seven (107) respondents completed the questionnaire. From the study, it was concluded that non-projected aids were frequently used than projected aids. Also, inadequacy of some of projected aids poses a major challenge to the use of teaching learning resources. Therefore, academic boards, principals, administrators, headmasters and teachers of various institutions should make it a point to ensure constant assessment of non-projected aids currently in use in teaching geography in Senior High Schools.*

**Keywords:** *TLM, Geography Teaching In SHS, Teaching Learning Resource*

### **I. INTRODUCTION**

The process of learning has been investigated by many Educational Psychologists for many years. Accordingly, they have advocated strongly for the use of Teaching Learning Resources during instructional hours in order for the desired knowledge to be achieved. Chalton et al (1965) suggests that presentation of fact or knowledge within a meaningful context, however, is an important consideration for effective learning. Wittich and Schuller (1962) also write that seeing, hearing, looking and listening are the primary means of human learning. Again, UNESCO (1965) says that “a child’s visual memory is developed by making him learn geographical terms in their precise context in sketches, wall maps or atlas” (p.8). Therefore, for an effective and any meaningful teaching and learning to take place in any geography lesson, one cannot do away with teaching learning resources.

Geography as an academic discipline in the Senior High Schools aids the development of the individual in totality into consideration all the domains; the affective, cognitive and the psychomotor. Considering the broad nature of the discipline, it beholds on the geography teacher to employ all pedagogical skills and teaching learning resources available in order to bring out the real objective of the subject and the total development of the students pursuing it. The Provisional National Defence Council (PNDC, 1987) launched the Educational Reform Programme that emphasized practical oriented teaching of all social science subjects as well as making them more functional to the needs of society. Hence, geography which is one of the social sciences thus has to be more practicalised and functional. It has been said that the environment is the laboratory of every geographer. Thus, in the geographer’s quest for teaching learning resources to aid effective teaching and learning, he is presented with a wide array of teaching learning resources.

#### *A. Statement of the Problem*

In some well-endowed schools, teaching learning resources are effectively used and the result is evident through the exclusive performance of these students in their examinations. This is as a result of financial assistance the discipline gets from the school authorities. Computers, slides, television sets, projectors, films, tape recorders, cameras, etc are all supplied by the school authorities. All these are expensive gadgets. The professional competencies of some of the geography teachers cannot be overlooked coupled with their dedication to work and their willingness to employ newly discovered teaching aids to enrich their lessons. As a result of these, students’ interests are sustained throughout their course of study and thus better grades are achieved. However, it appears most geography teachers find it difficult to identify and locate some of the currently used teaching leaning resources. Also, it seems that most teaching learning resources are not effectively used by a number of geography teachers. The researchers suspect that most senior high schools are less equipped with current teaching learning resources.

### **II. LITERATURE REVIEW**

This section considers the views experts have expressed about teaching learning resources currently in use in Senior High Schools. This section is divided; the theoretical review and the empirical review. This study therefore, aims at finding out the identification, uses, effectiveness and problems associated with the use of teaching learning resources currently in use in Senior High Schools.

**A. Theoretical Review**

According to Cable (1983), inexperienced teachers normally regard non-projected aids as second rate visual aids in view of the glamour they attach to projected aids such as films, radio and television. To him, non-projected aids are the backbone of the whole range of classroom visual aids. According to him, these aids have infinite variety of size, shape, colour and appeal. He further asserts that they are fair more easily adapted to the requirement of any subject. He expresses his support for their use when he says “the non-projected aids have to be used and used skillfully in classroom situation” (P. 11).

**i. Identification, Uses and Effectiveness of Teaching Learning Resources**

**(a) Models**

Farrant (1990) stated that models are made to look just like the real thing; these are called scale models. Sometimes a model is designed to demonstrate a process or a concept; such models are called diagrammatic. When models are constructed so that they actually work; they are called working models. With a globe we have a model that enables us to picture the whole earth without difficulties. Among the many types of models are those which show reliefs, for example, it is possible to trace out contours on plywood or hard board, cut out the material and place the layers on top of each other. The resulting relief map shows the slopes, its terraces, but these may be filled in with plaster of paris. Dale (1964) defines models as recognizable three dimensional representations of real things. Models simplify the real thing and make it more easily for the students to understand.

**(b) Maps**

Farrant (1990) states that maps combine the features of both pictures and charts, in that they represent something that is real and at the same time do so in the form of summary. That maps are symbolized summary of the real earth and it is important to remember this, for symbolism is a code and children need to be taught how to read such codes. Thus, the best type of maps for introducing students to maps at early stages is the very large scale survey maps, which show only a small neighbourhood. Hilton (1961) divides maps into two; (i) topographical maps which show both the natural features of a town, place or country such as rivers, mountains the shape of a coastline, and the artificial ones made by man like roads, buildings, villages, railways etc. The other type of a map is the statistical or distribution which shows the distribution of rainfall, temperature, crops, minerals and many other things of interest in geographical study. Long and Roberson (1968) write that “the ability to use maps of a wide variety of type and scale is essential for all those who study geography” (p.47). Tamakloe (1996) commenting on the usefulness of maps in general has this to say. Maps have the ability to provide accurate or orderly description of the character of the surface of the earth. They are good substitute for studying an area when it is impossible to visit the area. They can also be used to supplement the study of an area which has been visited (p. 17).

**(c) The Chalkboard**

The chalkboard is the most common non-projected aid and one of the most useful. Since it lies in front of the students, it stands as a visual testimony of the teacher’s work. According to Harris (1969), the chalkboard is “the cheapest and most common, convenient form of visual aid” (p.10.) UNESCO (1967) also asserts that “whatever the age of the pupils and the standard they have reached in geography the chalkboard remains the essential item of equipment throughout” (p.4). It points out that the chalkboard can make the teacher’s work very effective, and if he uses it in conjunction with other sources of information available to him, he will find that his pupils grasp his lessons more easily.

Brown, J.W, et al (1973) have stated that when teaching lessons, elements that develop from simple to complex ideas, teachers should build their explanation on the chalkboard point by point. They should add symbols, charts, maps or outlines at the right time to emphasize the content involved. Before a class session, a teacher may use the chalk-board for displaying materials relevant to the day’s work. Maps to be used for a lesson may be hung in front of the chalkboard until they are not needed. Thus, the teacher can build the kind of things he commonly wants to illustrate. Good chalkboard illustrations must be simple, easy to draw quickly and above all clearly visible from the back of the classroom. The assertion of Brown is true in that for any geography lesson to be successful, there is the need to use a wide array of teaching learning resources. These enhance effective teaching and understanding of geography lessons.

**(d) Charts**

Wittich and Chuller (1962) defined charts as a visual representation of numerical data. A table of figures may contain a wealth of valuable information but a graph of the data represents the gist of that information. Birch (1964) has stressed that much statistical information can often be shown by means of graphs which review significant facts to the mind far more quickly than columns of statistics. For a chart to play an effective role, Cable (1983) points out that it must be big enough to be seen by the whole class. Also it must have clarity, be attractive enough to capture and hold the pupil's attention, be accurate and authentic in its representation of pupils and things and its use of colours. From the above, we can boldly say that charts if well prepared and effectively used will arouse and sustain students' interests throughout the lessons.

#### **(e) Specimen**

Dale (1964) defines specimen as real things. He stressed that specimens make the learning situations more concrete, more authentic and more interesting. From the point of view of Farrant (1990), care and attention which students must exercise in looking after the living creatures teaches them a great deal. Living specimen are better visual aids than preserved ones or pictures of them. In the case of inanimate specimen, care should be taken that those selected as visual aids are bigger enough to be seen clearly by all the members of the group with whom they are to be used.

Collins Harris (1969) emphasized that in teaching the local area rocks, plants and agriculture product, specimen can be used for illustrations. They may be used for just demonstrations in one lesson. The researchers hold the views that the uses of specimen are beneficial to the teaching of geography. This is because with the use of specimen students get firsthand information about real things and also get in touch with nature.

#### **(f) Pictures**

According to the Incorporated Association of Assistant Masters in Secondary Schools (1952), a picture enables one to have an accurate conception of a landscape or human activity in the distance part of the world. They concluded by saying:

- It cannot give the why and wherefore of what is seen, but it can show pupils what is there and so enable them more readily comprehend any explanations that may be offered than if they had never seen the picture, (p.120).

Farrant (1990) is of the view that pictures illustrate and bring a sense of reality to what is taught. Pictures are of use for stimulating interest, creating correct impressions and bringing lessons to life. Hilton (1961) states that a suitable picture shows all the details of a scene quickly and as they appear in respect to each other in real life. Only pictures which are literally true, either photographs or pictures made directly from them should be used with children and most of them show ordinary every day happening and things.

UNESCO (1970) also affirms the importance of the picture in the teaching of geography when it says "it helps to give the subject a concrete character in those areas where direct observation is impossible" (p. 156). It further asserts that in choosing which picture is useful for a class, the teacher should be governed by the rule. The rule is that a picture is good for geographical point of view only if it can be made to illustrate 'the substance of the lesson' (p.156.)

Williams (1955) also asserts that to use a picture effectively, the teacher must develop the ability to recognize and explain geography in a photograph. To him, pictures are not of much use in the teaching of Geography unless the teacher learns how to make photographs come alive. To add to the above the use of photographs bring things that are far and beyond the reach of students and teachers closer or more accessible.

#### **(g) Textbook**

The importance of textbook as a teaching aid cannot be over emphasized. According to Weaver and Bollinger (1949) "the textbook may be thought of as a lurching pad for the class. It is the take off point for the discussions, further readings and other activities" (p.107).

Weaver and Bollinger (1949) also assert that the textbook, when it is in the hands of the student, can guide and stimulate his thinking. It also tends to guarantee the uniformity of instruction throughout schools. They conclude by saying:

- it is a depository of information. The taking of notes is an adequate substitute for the book .....despite any
- Wishful thinking the average teacher needs help and textbook appears to give the most tangible assistance (p.23).

Majason (1966) points out that, a good textbook is one that is simple in language, very clearly written and illustrated, easily understood by pupils and has an attraction for them, so that they always have desire to use it with confidence.

UNESCO (1967) makes the same point in a different way when it says:

- The choice of textbook when left to teachers should be governed by various considerations;
- Suitability for the use, adequacy of background material, clarity of style and layout, intellectual honesty and simplicity. (p.4).

#### **(h) The Globe**

Hilton (1961) has stated that a globe is the only true representation of the earth; No flat map can give a representation of the earth which is correct in every way. Further reference to the globe should be made whenever maps of any sizeable portion of the earth surface are used. The globe, according to the UNESCO (1967), “is the only representation of the earth in which there is no distortions”. For this reason, it argues that the globe should be used frequently especially with Junior Classes to make them understand the exaggeration and distortion found in maps. In terms of its uses, UNESCO asserts that the globe should be used to show the true forms, portions and distances. It further argues that the globe can be used to illustrate the oneness of the world and to teach pupils what meridians and parallels are, as well as why there are differences in the times of the day. The Incorporated Association of Assistant Masters in Secondary Schools (1952) also affirm the usefulness of the globe when they say “it is essential in introducing the pupil to those proportions of geographical vocabulary which are concerned with the earth as a whole and its movement in the space” (p.117). Farrant (1990) is of the view that globes show the true relationship between the land and the sea area of the earth surface. The globe is essential for showing the shortest routes between countries and continents in high latitudes for comparing shapes and size of lands over the earth for explaining day and night, the seasons and the wind systems of the earth.

#### **ii. Problems associated with the use of non – projected aids**

The list of minimum non – projected resources include chalkboard, models, charts, maps, terrestrial globe, wall maps, instruments for measuring weather elements ( temperature, rainfall, pressure, wind), specimen collection (rocks, minerals, clips), pictures, etc. In the suggested syllabus for senior secondary schools, a list of non – projected resources are required to teach geography is given. However, according to Agbesinyale (undated) some schools they visited lacked most of the basic teaching learning resources. It was not uncommon to find out that most schools in their study area did not have enough of such materials. In some of the schools where the little resources do exist, they are in deplorable condition. Teachers are therefore, compelled to improvise which in some cases are not very ideal.

Although, many Educational Stakeholders (school authorities, curriculum experts etc) emphasise the need for the use of non – projected aids in teaching geography, they are unwilling to finance such teaching aids. Archer and Dalton (1970) suggest that teachers whose employers cannot provide such facilities should exert every pressure on their inspectors or local authorities to provide them. Time has been a major problem in organizing lessons particularly if it involves non-projected aids demonstrations. Teacher wishing to organize such demonstration lessons have often find themselves prevented by internal difficulties within the school.

Wooldrige (1979) suggests that teachers will have to co-operate with their colleagues to accept the various changes that the organization of demonstrations in geography especially fieldwork will create within the time-table. He added that heads will often have to be convinced that the time involved in such field work is worth while.

#### **B. Empirical Review**

This section seeks to review the works of Amaning (1996) and Sully (1996) under the following issues; Purpose of the study, the methodology, the findings and conclusions and recommendations.

#### **i. Purpose of the Previous Studies**

In the work of the first researcher, Amaning, A. O. (1996), he tried to find out the role of Non- projected aids in the teaching of Geography in the Senior Secondary Schools. His purpose was to make the teachers of geography in the selected schools conscious of the usefulness of Non-projected aids as teaching instruments to convey certain ideas basic to knowledge in the shortest possible time and to convey to students how effective Non-projected aids are in enhancing the learning process. In the work of the second researcher Sully (1996), he also tried to look at the role of non-projected aids in the teaching of geography in Senior Secondary Schools in Ghana. In his study, he tried to discover if there are sufficient non-projected aids in Senior Secondary Schools, to find out the extent to which non-projected aids are useful in the teaching learning process from the geography teachers’ perspective, the work is also to find out the extent to which teachers make use of teacher made non-projected aids, it seeks to find out the effectiveness of the uses of non-projected aids in facilitating learning. From the above, one can say that both

researchers tried to find out the usefulness of non-projected aids in teaching geography and also effectiveness of non-projected teaching aids in facilitating learning in geography.

However, the second researcher, Sulley, went further to throw more light on sufficiency of non-projected aids in teaching geography and how teachers make and use teacher-made-non-projected aids in teaching geography in Senior Secondary Schools. We intend to add the problems associated with the use of non-projected aids in teaching geography to the objectives used by the previous researchers. We again intend to ignore the making and the use of teacher-made-non-projected aids as stated by Sulley (1996). The major variables identified in the previous researchers' works can be classified into dependent and independent variables. The independent variables are the effectiveness of non-projected aids and usefulness of non-projected aids in the teaching of geography whilst sufficiency of non-projected aids is the dependent variable.

#### **ii. Methodology of the Previous Studies**

Under the methodology, the following variables will be considered; the accessible population, the sample and sampling procedure used in getting the sample and the research instrument used. With the accessible population, Amaning (1996) targeted ten geography teachers and eighty SSS 2 geography students in the Cape Coast Metropolis. Sulley (1996) targeted all the Senior Secondary Schools in the Tamale Metropolis offering geography. The total numbers of SSS were seven at the time of the study but five SSS offering geography amounted to 71.4% of the total schools considered. We intend to use Senior High Schools in the Cape Coast Metropolis as used by Amaning (1996) but we will concentrate on St. Augustine, SAMMO and Adisadel. We will also increase the size of the target population to 90 instead of the 80 SSS 2 students chosen by Amaning in order to give a fair representation of target population.

Both researchers used simple random sampling method in the selection of respondents to the questionnaire. Amaning (1996) used simple random sampling procedure in selecting institutions, teachers and students whilst Sulley (1996) used simple random sampling procedure in selecting only the respondents. Sulley (1996) used stratified sampling procedure to select 30 students and 20 geography teachers. The researchers are of the view that the methods used by both writers are accepted except that their population size used should have been increased to give fair representation of the target population.

However, we will also use simple random sampling in selecting students and purposive sampling in selecting teachers. This will enable us to get required information from the teachers of the different areas of the subject (physical, regional and practical geography). We will select 90 students; 30 from each school.

Amaning (1996) and Sulley (1996) both used questionnaire in collecting their data. They designed two separate questionnaires one each for teachers and students. Both questionnaires for students and teachers included closed and open-ended questions. The researchers are of the view that the use of questionnaires was appropriate since the target population were literates. Again, the use of close and open-ended test items helped earlier researchers to solicit their require information. In Amaning's study, 37 test items were prepared for the teachers and 49 for students whilst in Sulley's work, a 26 –item questionnaires were designed for students and 25 items questionnaires were designed for teachers. The test items used by both researchers were too many to be answered by the respondents. The researchers are of the view that such number of test items will deter respondents from accepting to answer questionnaires and also from giving accurate information needed.

With regards to the research instruments, we will also use questionnaire as used by the previous researchers. This is because questionnaire is very appropriate and permits statistical measurement of objectivity.

#### **iii. Findings of Previous Studies**

In the study of Sulley (1996), the following variables such as geography teachers' background, students' background, the adequacy of non-protected aids in SSS, the uses of non-projected aids and its effectiveness were reviewed. With regards to teachers' background, all the geography teachers in SSS were academically qualified to teach geography as they all possess "A" level certificate. However, 60% of the teachers were professionally qualified to teach geography in SSS as they were trained teachers. The rest of the teachers (40%) were non-professionals and also found to lack teaching experience as many of them had taught geography for less than three years. In view of these shortcomings on the part of geography teachers as indicated in the researchers' study, we will ignore non-professional geography teachers because we want only trained geography teachers to teach the subject so as to effectively use the non-projected aids in SSS. In our case also, we intend to design two separate questionnaires; one for teachers and the other for the students. However, Amaning (1996) failed to investigate the background of geography teachers. But confirmed that 100% of the teachers used the commonest non-projected aids in their lessons.

From the literature review of Sulley (1996) shows similar responses. Ninety per cent of the teachers and 83.3% of the students stated that non-projected aids were used in teaching geography in SSS. Again, the findings of both researchers, Amaning (1996) and Sulley (1996), indicate that some headmasters were reluctant to release funds for the procurement of non-projected aids for teaching purposes. The examination of the above variable indicates some defects in the use of non-projected aids in enhancing teaching and learning of geography in SSS. It appears that the methodology and variables employed by both researches in arriving at their findings from the above were quite appropriate but they did not support it with any literature in the theoretical section. We intend however, to support any findings we will come out by using the appropriate literature.

Another equally important observation from Amaning's (1996) study was that he used only one sampling procedure in selecting the students, the geography teachers and the institutions' questionnaire. In our case, we will employ two sampling procedures; questionnaire for students and purposive sampling for the teachers to make the findings more valid, reliable and objective. Sulley (1996), on the other hand, also failed to mention the sampling procedure used in the selection of the geography teachers, but we have indicated purposive sampling technique in selecting the teachers.

#### **iv. Conclusions and Recommendations of the Previous Studies**

From the foregone conclusions and recommendations of the related studies under review, it can be concluded that there is the need for Ghana Education Service (GES) to intensify its in-service training for geography teachers on the effective uses of the current non-projected aids in SSS. Both researchers have also recommended that headmasters should release funds for the procurement of non-projected aids to the geography teachers for teaching purposes. Again, both researchers came out with similar suggestions that there should be a rapport among all the agents involved in the teaching and learning of geography in the SSS to bring about meaningful learning in the subjects.

Both researchers recommended strongly that geography teachers should prepare improvised materials from their environment. They should also encourage students to make models of their own interest, relia and draw sketch maps that can be used for discussions in the classroom. This to them, enhance effective teaching and learning, sustain students' interest, enhance students' understanding and performance in geography.

### **III. METHODOLOGY**

The study was purposely meant to collect information from Senior High School geography teachers and students on the teaching and learning resources currently used in teaching geography. This chapter explains the techniques used to do the research and particularly to collect data. To do this, it discusses issues such as research design, population, sample and sampling procedure, instrument, data collection and data analysis procedures.

#### *A. Research Design*

This research is a case study in the Cape Coast Metropolis about the assessment of teaching and learning resources currently in use in Senior High Schools. A case is the study of a small group to represent a larger group. The target population was larger so the researchers resorted to case study to make the study convenient. The use of case study makes the generalization of result obtained from assessment of teaching learning resources convenient and easy. It is also cost effective and timely appropriate. Besides, it makes it easy in the study of population with similar characteristics. The use of case study, however, has weakness since the information obtained may not be the true reflection of the various schools-St. Augustine's College, Adisadel College and Sammy Otto Senior High School.

#### *B. Population*

The area of the study for this research was in some targeted Senior High Schools offering geography in the Cape Coast Metropolis. These schools were St. Augustine's College, Adisadel College and Sammy Otto Senior High School. In each school, thirty (30) geography students were selected and ten geography teachers were also chosen from all the schools.

#### *C. Sample and Sampling Procedure*

Three Senior High Schools were selected from the Cape Coast Metropolis. Thirty students were selected from SS 2 classes using systematic sampling procedure. With this, the researchers chose every second student as a respondent. In all, thirty (30) geography students were obtained from each school. With regards to geography teachers, convenience sampling was used. Two questionnaires were administered and collected at St Augustine College because only two geography teachers were available at the time of the study. At Adisadel College, four questionnaires were

administered because there were four geography teachers but only two were retrieved while at SAMMO, only one questionnaire was administered and collected.

Systematic sampling procedure was chosen for the students because it minimizes difficulties researchers may encounter in selecting respondents while convenience sampling was used for teachers because they were those who were available at the time of our field visit. The sample size selected for each school was to give a fair representation of the target population. The sample size used for the geography teachers was seven (7) out of a total of nine in all the three schools. Out of ninety (90) students selected, only sixteen were females representing seventeen point eight (17.8) per cent, the remaining seventy four (74) were males representing eighty two point two (82.2) per cent. This is because two out of the three schools (Adisadel and Augustine) are male schools and the remaining one (Sammy Otto) is a mixed school. All the seven teachers who responded were professionals. One is master's degree holder, while the remaining six are first degree holders.

#### *D. Instrumentation*

The instrument used was questionnaire. It was prepared by the researcher. As a result of series of discussions and deliberations, the researcher came out with sixteen items for teachers and fifteen for students separately. With the teacher's questionnaire, the first six items were used to investigate their background while the rest of the questions address the subject matter (Assessment of Teaching and Learning Materials currently in used in Senior High Schools). With the students, fifteen questions were developed and the first seven items were used to find out the students' background. The remaining items were used to address the main issue under discussion. Both the teachers' and students' questionnaires contained closed and open-ended questions.

The researcher chose questionnaire because, it is convenient to use since the target population were literates. Also, it was adopted because it was cost saving. Notwithstanding these strengths, the researcher identified few weaknesses. First, the questionnaires were not easy to construct since it requires expert knowledge. Second, its administration was time consuming because the questionnaires were sent and collected on different days from the various schools.

The content and construct validity was determined through the reviewing of related literature and discussions. Based on the strength provided above, reliability co-efficient of 0.8 is assured. This method was used by Amaning (1996) and Suley (1996) and it was successful.

#### *E. Data Collection Procedure*

The researcher first visited the three schools with the introductory letters. Upon receiving the introductory letters, the Headmaster then introduced the researcher to the various geography teachers who in turn took the researcher to the SHS 2 classes. The researcher explained briefly to the students how to complete the questionnaire after a formal introduction by the geography teachers. In selecting the students to fill the questionnaire, every second student was chosen by counting according to rows. However, the questionnaires were collected three days later since the students were not able to complete all because they were in examination week. The teachers' copies too were filled and collected three days later.

The questionnaires were administered on 22<sup>nd</sup> March, 2010, and collected on Wednesday, 24<sup>th</sup> March 2010.

#### *F. Data Analysis*

In the analysis of the questionnaire, frequency distribution was used with the scores made on each item. The frequencies were translated into simple percentage. This made the spread easier to determine. The analysis for the individual item was sorted and grouped according to similar responses obtained. These responses were later converted into frequencies and then into percentages. This chapter dealt with the methodology. It covered the research design and the population including sample and sampling procedure, instrument, and data collection procedure and data analysis.

### **IV. SUMMARY, CONCLUSION AND RECOMMENDATIONS**

The previous chapter presented the results and discussed the data collected. This chapter summarizes the study and the major findings of the study. It also looks at the conclusions drawn out of the main issues concerning the analysis of data collected, and further makes recommendations.

#### *A. Summary Of The Study*

This study investigated the assessment of teaching and learning resources currently in use in geography in selected SHS in the Cape Coast Metropolis. Five research questions guided the study. Chapter one dealt with the background

to the study. It also contained the statement of the problem, purposes of the study, research questions, significance of the study, delimitation, limitations of the study, and the organization of the study. Chapter two dealt with review of related literature concerning the subject matter. Both theoretical and empirical related literatures were reviewed under the following subheadings: teaching and learning resources in geography, the sufficiency of these resources, the benefits of using these resources as well as the problems teachers and students encounter in using those resources were discussed. Both theoretical and empirical related literatures were reviewed.

Chapter three was devoted to the research methodology. Descriptive design was adopted for the study. The chapter dealt with population, sample and sampling procedures, data collection procedures as well as data analysis procedures. Ninety SHS students and fifteen teachers randomly sampled for the study. A self-constructed questionnaire was used for the data collection.

Chapter four dealt with the results and discussions of the findings. Descriptive statistics (Frequencies and percentage tables) were employed for presenting the data. There was a general discussion after each table which was meant to answer each research question.

#### *B. Summary of Major Findings*

The study revealed that globes are the dominant teaching and learning methods available for the teaching learning of geography. This was shown by 85% of the students and 80% of the teachers. This was followed by textbooks 62% of students and 100% of teachers, with projectors representing the least available resources in the schools. The results also revealed that most of the resources available in the SHS are sometimes used while others are never used, with few resources being used frequently during geography lessons. The study revealed that projector, 55% of students and 87% of teachers, and televisions, 57% of students and 53% of teachers, are never used in geography class while maps are the most frequently employed resource in geography lessons. It was also revealed that the atlas and charts are the most sufficient teaching and learning resources in geography. This was represented by 89% of students and 93% of teachers, and 83% of students and 80% of teachers respectively. These were followed by textbooks with projectors representing the least sufficient teaching and learning resource in geography.

#### *C. Conclusions*

It can be concluded from the findings that globes and textbooks are the dominant teaching and learning resources in geography class with projectors and televisions representing the least employed resource in geography lessons.

It can also be concluded that few of the resources available in the SHS are frequently employed during geography lesson especially those that are powered by electricity such as televisions and projectors. But those that are easily procured are available and are frequently employed in teaching and learning.

It can be concluded further that although some resources are available in the SHS for teaching and learning geography they are not sufficient, especially those that are powered by electricity such as projectors and televisions. Those that are not expensive are sufficient in number in the geography class.

The study revealed that most of the teachers and students lack knowledge in using some of the resources in the SHS. It can therefore be concluded that this poses major challenge to the teaching of geography since teachers' and learners' ability to use a particular resource can influence their perception toward that particular resource. It can be concluded that also the inadequacy of some the teaching learning resources pose major challenge to the use of some of the resources since much pressure is put on the existing resources.

Finally, it can be concluded that the use of teaching and learning resources in geography does not only equip students with first-hand information and accurate picture of the world but also guides and stimulates students' thinking and interest in learning geographic concepts.

#### *D. Recommendations*

If the teaching and learning of Geography is to be promoted in the SHS, then, necessary teaching and learning resources should be provided. Although some of the resources are available, they are not sufficient to enhance effective teaching and learning of geography.

It is also recommended that regular in-service training and workshops should be organized for teachers, especially, those who have taught for over 10 year in order to keep them abreast with the use of modern teaching and learning resources such as projectors and computers.

Finally, since the use of teaching and learning resources in geography was held to be important, there must be a strong advocacy for the use of teaching and learning resources not only in geography but in other subject areas at all levels of education in the country.

*E. Areas for further studies*

We suggest further studies to be carried out on topics regarding the use of teaching and learning resources at all levels of education in Ghana. We also suggest that a study regarding the effects of unavailability of teaching and learning resources on teaching geography should be conducted. Finally, a study regarding the effects of teachers who do not possess the requisite knowledge in the use of some teaching and learning resources in geography and yet employ those resources in geography class be conducted.

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