



Research Article

EXPLORING CHALLENGES FACING EFFECTIVE USE OF INSTRUCTIONAL MATERIALS BY GEOGRAPHY TEACHERS IN SENIOR SECONDARY SCHOOLS IN EASTERN SIERRA LEONE

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ABSTRACT

Teaching is an old art in human history. Effective teaching and learning has always emphasised the use of instructional materials in public, private and community schools in Sierra Leone. Therefore, this research was carried out to explore the challenges of effective use of instructional materials by geography teachers in Eastern Sierra Leone. The objective was to explore the challenges facing the effective use of instructional materials by geography teachers in Kenema City. The descriptive research design was used. The sampling size selected includes ten (10) Senior Secondary Schools (SSS); from each selected school three (3) geography teachers were selected totalling thirty (30) respondents. Ten (10) school administrators were also selected from the selected schools; one (1) each and five (5) inspectors of schools attached to the schools from the Ministry of Basic and Senior Secondary Education (MBSSE). In total forty-five (45) respondents were selected. The results revealed that the available geography instructional materials were mainly globe, maps, charts etc. in all the sampled schools and only two (2) out of the ten (10) schools had school meteorological stations but were not operational. A number of challenges facing the use of instructional materials by geography teachers ranged from lack of available geography instructional resources to laziness/lack of expertise to improvise geography instructional materials. Attempt at solution from the perspective of geography teachers ranged from provision of available instructional materials or resource centres equipped with geography instructional materials to inclusion of Geographic Information System (GIS) in geography curriculum. It was concluded that the challenges facing the use of instructional materials by geography teachers in SSS have impacts on the overall performance of pupils. Recommendations ranged from improvisation of geography instructional materials to seasonal training of geography teachers in GIS through seminars.

Keywords: Improvisation, Geographic Information System (GIS), Resource centre, Graphic materials, audio & audio visual materials.

INTRODUCTION

According to de Guzman (2015), Geography is one of the branches of Social Science which encompasses a lot of topics in life on earth such as physical and cultural geography, topical, regional and systematic geography. Geography as a school subject, serves as a bridge between the physical and social sciences. Therefore, its instruction in schools needs appropriate use of teaching and learning materials to enhance effective teaching and learning process. Instructional materials/learning aids are teachers' strategic factor in organizing and providing education simply because they help to elaborate a concept that the teacher could not, without an instructional material (Oni, J.O, 1992). The use of instructional/teaching learning materials bring life to learning in various ways such as arousing the interest of learners, stimulating pupils to learn, easing the work for the classroom teacher etc. Instructional materials make learning more interesting, practical, realistic and appealing. Their use also enables both teachers and pupils to participate actively and effectively in lesson sessions. Instructional materials create room for acquisition of skills; knowledge and develop confidence and self-actualization in learners. However, the lack of its appropriate use or non-availability in schools is a problem in totality. Rittel and Webber (1973) referred to schools teaching pupils without available instructional materials or teaching/learning resources as a wicked problem that has many solutions but will ultimately take a while to be solved. The lack of resources in classrooms can cause extreme distress on both pupils and teachers in that it makes them unable to learn to their fullest

potentials. Instructional materials are not available in many schools in third world countries and their supply by government and or education providers is not sufficient. This affects pupils from poverty stricken homes whose parents, caregivers or guardians cannot afford to pay for the few available learning materials. Likewise, teachers with low salaries are not prepared to pay extra money for instructional materials let alone have time to improvise. This situation is better described by Duncombe (2017) who posited that students in high poverty schools do worse on standardized tests, and are more likely to be chronically absent during the school year; more likely to be held back in their grade and less likely to graduate on time. It goes to show that pupils in high poverty areas are being extremely affected by the lack of resources. In the work of Ezegbe (1994), two instructional materials are identified via: visual materials which are made up of reading and non-reading materials and audio-visual materials which comprises electronically and non-electronically operated materials. For Ikerionwu (2010), instructional materials include all but the following, textbooks, charts, and maps, audiovisual and electronic instructional materials such as radio, tape recorder, television and video tape recorder. The decline of geography as a school subject at Senior Secondary School level has been questioned and investigated by many school authorities, Scholars and Academics in West Africa and the World by extension. It has been attributed to several factors paramount among the reasons was non-availability of instructional materials. This is made clearer in the work of Aderogba (2011) who posited that laboratories and sustainable teaching and learning about geography in Nigeria is lacking to pupils coupled with lack of geographical and meteorological gardens making the teaching of geography to be abstract in spite of several knowledge that will be gained by pupils. It should be borne in mind that geography teaching and learning situation cannot be effective without the use of adequate and appropriate use of instructional materials. Geography teachers

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and pupils offering the subject will face uncontrolled difficulties if instructional materials are not readily available and used effectively and appropriately. This will lead to poor performance of pupils in exams and or dropping it for an alternative subject. The use of instructional materials is imperative in order to enable pupils to be actively involved in class activities particularly when they are adequate and appropriate to their level. Therefore the objective of this study is to explore the challenges facing effective use of instructional materials by Geography teachers in Senior Secondary Schools in Kenema City, Eastern Sierra Leone.

CONCEPTUAL FRAMEWORK ON INSTRUCTIONAL MATERIAL

According to Ezegbe (1994), instructional materials are a combination of both audio and visual materials since the two senses of hearing and seeing must be stimulated to facilitate adequate teaching and learning process. This suggests that the classroom teacher uses his/her teaching strategies/methods with well-prepared instructional materials in teaching if effective and meaningful is to be achieved. Learners comprehend and participate better in their own learning process if its appeal to their senses of seeing, hearing, touching etc. Instructional materials are resources that support educators in making decisions on what and how to teach (Butt, 2011). According to Yasar, (2004), instructional materials are tools, instruments and resources that are used to develop knowledge, skills, attitude and values in learners. The use of instructional materials is important in geography teaching since the courses are rather suitable for more visualisation and learning by application and individual experiences. Textbooks have been outstanding as instructional/teaching learning materials in educational system in Sierra Leone. In the words of Raw (2010), textbooks are the first instructional materials used in schools and they have served as the nucleus to all the learning activities related to a particular curriculum. Instructional resources are the different kinds of materials or resources that teachers and classes use in the teaching-learning processes in order to make it more effective and productive (Onuoha, 2011).

METHODOLOGY

The study was carried out in Kenema City, Eastern Sierra Leone. The city is located at the foot of Kambui Hills North and large area is situated on the Moa basin. As the regional headquarter of the region, there are more Senior Secondary Schools and other learning institutions than other districts in the region. Descriptive research design was used in this study simply because it determines the challenges of effective use of instructional materials by geography teachers in Senior Secondary Schools in Kenema City. The population of the study comprises all Senior Secondary Schools in Kenema City which included community, private and public schools. The frame comprises of Senior Secondary Schools that offer geography from SSS 1-3 and attempt it at the West African Examination Senior Secondary School Examination (WASSCE). The sampling size comprises of geography teachers, school administrators, and Ministry of Basic and Senior School Education Inspectorate. In selecting the ten schools, twenty (20) ballot papers were prepared. On ten (10) of the ballot papers were written selected and on the other ten (10), not selected. The papers were folded and placed in a plastic bag and at each school, one ballot paper was selected and if the ballot paper picked had selected written on it, it was recorded and if not selected, it was discarded. This was done in twenty secondary schools until ten (10) schools were selected which formed the sample size of the study. Three (3) geography teachers were also selected from the ten (10) selected schools totaling thirty (30). Similarly, two (2) school administrators were selected from each school mainly heads of geography department and principles which

totalled ten (10). Five (5) inspectors from Ministry of Basic and Senior Secondary Education were purposefully selected because they were directly involved in monitoring and inspecting the selected schools. In total forty-five (45) respondents were selected who formed the size of this study. To ascertain the validation of the instrument, the draft instrument was pretested in five (5) Senior Secondary Schools in Kenema District. It was adjusted, corrections effected and the final copy distributed to the respondents. It was responded to within a week and collected for collation. Each response was read in their hearings and accepted to be correct for ethical considerations. Data analysis was done by simple frequencies and percentages (%).

RESULT AND DISCUSSION

AVAILABILITY OF GEOGRAPHY INSTRUCTIONAL MATERIALS IN SELECTED SENIOR SECONDARY SCHOOLS IN KENEMA CITY.

VARIABLE	STRONGLY AGREE (SA)	AGREE (A)	DISAGREE(D)	STRONGLY DISAGREE (DA)
Geography resource room	-	1 (2%)	2 (4%)	42 (94%)
Audio (tape and video recorders etc)	-	-	-	-
Audio-visual (video, computers, television etc)	-	-	-	-
Graphic materials (maps, charts, globe, graphs, posters etc)	40(89%)	5(11%)	-	-
Printed materials (geography textbooks, teachers manual, dictionary etc	25(56%)	15(33%)	2(4%)	3(7%)
Geographic Information System(GPS,GIS software etc)	-	-	-	45(100%)
Local/school meteorological station	15(33%)	10(22%)	8(18%)	12(27%)
Local improvised materials from (culture & traditional objects, stick, mud, plastic, etc)	20(44%)	21(47%)	1(2%)	3(7%)

SOURCE: Survey Data, 2022.

Table one: Availability of geography instructional materials in SSS in Kenema City.

Data gathered from the selected Senior Secondary Schools in Kenema city indicated that 94% strongly disagree that geography resource room is found in their school and 4% disagreed while 2% agreed that they had geography resource room in their schools. It was discovered during discussions with two (2) school administrators and one inspector of schools of the school that claimed having a resource room for geography that the resource room was provided but was not equipped for the teaching of geography. If it was equipped and used by geography teachers then it should have been in line with the work of Wales (1975) who held the opinion that the use of instructional resources would make discovered facts glue firmly to the memory of learners. The environment is also a good geography resource room if judiciously used by the geography teacher. This is in line with the work of Dewey (1959) who postulated that children should be using concrete materials from their local

environment and that they should be actively involved in manipulating the materials in order to construct their own knowledge. However, all the respondents (100%) stated that there was no available audio aid in a form of tape or video recorder in their schools as an instructional material for the teaching of geography but rather tape recorder was available for teaching oral English. In the same vein all the respondents (100%) indicated that there was no audio-visual aid in a form of computers, televisions etc in their schools used as instructional material for the teaching and learning of geography but there were computer rooms in eight (8) of the selected schools used as a resource room for Information and Communication Technology which was accessible. Discussions with principals and heads of department of the eight schools stated that it was meant for all subjects but geography teachers did not subscribe to it. Forty of the respondents representing 89% strongly agreed that graphic materials in a form of maps (topographical, geodetic, maps etc), globes, graphs and geographical charts were available in all the ten (10) selected schools and were used by geography teachers in their lessons. However, five of them representing 11% agreed that graphic materials as stated above were available in their schools. When asked whether printed instructional materials in a form of geography textbooks, manual for geography teachers, geography dictionary etc were available in the selected schools, 56% of the respondents strongly agreed that the identified materials are in their schools and 33% of them also agreed. However, 7% of the respondents strongly disagreed and 4% of them disagreed of the availability of the slated printing materials in their schools for teaching of geography. Respondents were further asked whether Geographic Information System was available in their schools; forty-five (45) of the respondents representing 100% indicated that there was no GIS not to mention GIS software or instruments like GPS in all selected schools in Kenema city. This cannot ensure effective teaching and learning of geography as the world is now moving from the use of traditional instructional materials to technological materials and the most recent in geography teaching are GIS, Remote sensing etc. The use of GIS in secondary education has begun in some countries for decades making their geography lessons interactive and practical as opined by Yomralioglu (2000), pointing out the use of GIS in secondary education which was first introduced in the United States of America, spread to Canada and many other European countries like Turkey. Today, their secondary education system is based more on the use of instructional materials powered by technology. However, fifteen of the respondents representing 33% strongly agreed and ten of them representing 22% agreed that they had local/school meteorological station in their schools while twelve of them representing 27% strongly disagreed and eight of them representing 18% disagree on the issue. There were local school meteorological stations in two (2) out of the ten (10) selected schools viz: Government Secondary School (GSSK) and Ahmadiyya Muslim Secondary School (AMSSK) but were not used by geography teachers and have collapsed. (See figure one, and two respectively).



FIGURE 1: Abandon & dilapidated School Meteorological Station at GSSK



FIGURE 2: Abandon & dilapidated Meteorological Station at AMSSK

Discussions with school authorities and inspectors of school reveals that these facilities were erected by Sierra Leone Agricultural Research Institute (SLARI) in 2016 and were initially used by geography teachers though it was short lived. In each school, a geography teacher was selected and trained by SLARI on the use and readings but the ideas gained are longer beneficial as intended. However, twenty-one of the respondents representing 47% agreed and twenty of them representing 44% strongly agreed that local improvised geography instructional materials including cultural and traditional objects, mud, plastic etc were available in the selected schools. Three of the respondents representing 7% strongly disagreed and one of them representing 2% disagreed of the availability of local improvised geography instructional materials in their schools. Discussions with school inspectors clearly denied the availability of improvised geography instructional materials in the ten selected schools and that teachers shy away from improvising teaching learning materials because of laziness, time constraints, lack of expertise etc.

CHALLENGES FACING EFFECTIVE USE OF INSTRUCTIONAL MATERIALS BY GEOGRAPHY TEACHERS IN SENIOR SECONDARY SCHOOLS IN KENEMA CITY

CHALLENGES FACED	STRONGLY AGREE (SA)	AGREE (A)	DISAGREE(D)	STRONGLY DISAGREE (DA)
Non-availability of instructional material.	2(5%)	10(22%)	20(44%)	13(29%)
Laziness and lack of expertise of geography teachers to improvise	30(67%)	10(22%)	3(7%)	2(4%)
Time constraints	25(56%)	15(33%)	5(11%)	-
Lack of appropriate geography textbooks, teachers' manual etc	35(78%)	8(18%)	2(4%)	-
Lack of support from school authorities	30(67%)	15(33%)	-	-
Lack of geography resource room	30(67%)	13(29%)	2(4%)	-
Lack of GIS, GPS, Remote Sensing (software) and Knowledge	40(89%)	5(11%)	-	-
Lack of local/school meteorological station	25(55%)	10(22%)	8(18%)	2(4%)

SOURCE Survey Data, 2022

Table two: Challenges facing effective use of instructional materials by geography teachers.

Out of forty-five (45) respondents sampled, 44% of them disagreed and 29% strongly disagreed that the major challenge facing effective use of instructional materials by geography teachers was its non-availability in their schools. They argued that their environment was filled with teaching learning materials but lacks the acumen to develop or improvise. Others are cheap and can be bought but geography teachers expect the school administration to buy for the school which is not quite visible. This is in line with the work of Nabwire (1998), who posited that the availability and quality of instructional materials are important for the implementation process to take place. The implementation should always require change in the provision of relevant and adequate textbooks, facilities and other required teaching and learning aids. However, 22% agreed and 5% strongly agreed that it was a challenge facing effective teaching and learning of geography in their schools. Category of teachers who belong to this group had lower qualifications while some were not trained in the discipline and therefore lacks the expertise to improvise and or use their environment. The non-availability or inadequacy of instructional materials in the selected schools affected the way teachers handled geography which led to poor teaching and learning situations in the schools. Respondents were asked as to whether they face challenge of using geography instructional materials due to laziness and lack of expertise to improvise teaching learning materials, 67% strongly agreed and 22% agreed. This shows that the raining received in teacher training colleges and universities were not enough especially in areas bordering around instructional materialism provision. However, 7% of the respondents disagreed and 4% strongly disagreed. This small number of geography teachers were those who took their time to prepare instructional materials without depending on school authorities. This is in line with work of Demirel *et al.*, (2004) who stated that developing and using teaching materials are more useful than using ready-made materials. When developing instructional materials geography teachers should involve the pupils because it improves their cognitive, kinesthetic and affective skills. 56% of the respondents strongly agreed and 33% agreed that time constraints was a major challenge facing the use of instructional material materials by geography teachers in the selected schools. 11% of the respondents however disagreed that time constraint was actually a challenge facing geography teachers for the use of instructional materials. Respondents indicated lack of appropriate and available geography textbooks, teacher's manual etc as a challenge facing the use of instructional materials by geography teachers in the selected schools as 78% strongly agreed and 18% agreed. Two of the respondents representing 4% disagreed. Their disagreement was based on the fact that technology has improved and is accessible and therefore recent and adequate geography teaching-learning materials can be uploaded from internets and where possible books bought through online. During discussion, school administrators and inspectors clearly stated that the schools have computer laboratory with internet facilities and was accessible to geography teachers but were not utilizing them due to lack of computer skills. Thirty of the respondents representing 67% strongly agreed and fifteen of them representing 33% agreed that lack of support from school authorities was a major challenge facing the use of instructional materials by geography teachers in the selected schools. This was not supported by (Ayot & Patel, 1992) whose work pointed out that failure of school management to recognize, appreciate and cater for the factors that influence instructional materials uses has contributed to low and ineffective use of teaching and learning. During discussions it was revealed that school authorities have not procured instructional materials for the teaching and learning of geography for decades likewise MBSSE. Again respondents were asked whether lack of

geography resource room was a challenge facing the use of instructional materials by geography teachers in the selected schools, 67% strongly agreed and 29% agreed. Two of the respondents representing 4% disagreed on the grounds that they should have created their own resource room as they have done in their own schools. The respondents were asked whether lack of GIS, Remote Sensing, GPS (and it software applications) and knowledge in them was another challenge faced by geography teachers in using instructional materials in the selected schools, 89% strongly agreed and 11% agreed. It was discovered that all the sampled geography teachers had no knowledge and bulk have not seen simple GPS due to the fact that GIS based materials were not found in any of the selected schools. This situation was contrary to those that operate in the U.S.A, Turkey and other European countries as pointed out by Yomralioglu (2000) which makes their pupils engaged in hands on training and gains practical knowledge. The significant contribution of GIS in the geography courses in those nations has transformed the oral, textual, abstract information into concrete and visual information for ensuring efficient and permanent use for pupils. The inclusion of GIS in the geography curriculum is necessary as it is in line with the suggestions of Davidson (1996) who postulated that computer based instructional media in geography curriculum and lesson is imperative as it make a valuable contribution to the quality of pupil's learning. Such media can be used in several ways in geography lessons as for example PowerPoint can be used to present geographical issues and data loges for collective weather data electronically. When asked as to whether lack of local/school meteorological stations was another challenge facing the use of instructional materials by geography teachers in the selected schools, 55% strongly agreed and 22% agreed. However, 18% of them disagreed and 4% strongly disagreed on the grounds that they had it erected in their schools particularly the Kenema Government Secondary School, Ahmadiyya Muslim Secondary School, Kenema and the Holy Rosary Secondary School, Kenema. It was discovered that they were all not used by the geography teachers as they were not in operational order.

ATTEMPT AT SOLUTION IN ADDRESSING THE CHALLENGES FACING THE USE OF INSTRUCTIONAL MATERIALS BY GEOGRAPHY TEACHERS IN SENIOR SECONDARY SCHOOLS IN KENEMA.

Respondents were asked to outline possible workable solutions in alleviating the challenges facing the effective use of instructional materials by geography teachers in Senior Secondary Schools in Kenema City. All the selected geography teachers and schools came up with the following; provision of available instructional materials in schools or resource centres equipped with accessible geography instructional materials, seasonal training through seminars, workshops etc. for teachers in geography, instructional material production, and in the new technological packages such as GIS, provision of appropriate and adequate geography instructional materials and above all, provision of local/school meteorological stations. Three out of the ten selected schools added that trained and qualified geography teachers be employed to teach the subject and pupils be involved in developing instructional materials to improve their creativity. of instructional materials in teaching, should not be neglected. Therefore the challenges encountered during the use of the materials, should be tackled for effective use of these materials. When necessary materials for geography teaching are provided in schools and the challenges of using materials are solved, the aims of secondary level geography curriculum may be achieved and the performance of the students may be improved. The importance of use of instructional materials in teaching, should not be neglected. Therefore the challenges encountered during the use of the materials, should be tackled for effective use of these

materials. When necessary materials for geography teaching are provided in schools and the challenges of using materials are solved, the aims of secondary level geography curriculum may be achieved and the performance of the students may be improved. The importance of use of instructional materials in teaching, should not be neglected. Therefore the challenges encountered during the use of the materials, should be tackled for effective use of these materials. When necessary materials for geography teaching are provided in schools and the challenges of using materials are solved, the aims of secondary level geography curriculum may be achieved and the performance of the students may be improved. The importance of use of instructional materials in teaching, should not be neglected. Therefore the challenges encountered during the use of the materials, should be tackled for effective use of these materials. When necessary materials for geography teaching are provided in schools and the challenges of using materials are solved, the aims of secondary level geography curriculum may be achieved and the performance of the students may be improved. Challenges of the Use of Instructional Materials in Geography Classroom in Secondary School: Nepal Keshav Raj Dhakal

CONCLUSION

The use of instructional materials plays a vital role in the teaching and learning of geography in Senior Secondary Schools as it eases the burden on the geography teacher and at the same time develop critical thinking skills in pupils. Proper presentation of well-prepared geography instructional materials enhances good understanding of the subject by the pupils. It should be borne in mind that non-availability of geography instructional materials in Senior Secondary Schools was big a challenge to geography teachers as the school and community environment provides myriad of materials which they can use to improvise. Solutions provided by the respondents were crucial for effective teaching and learning of geography and that it should be addressed soonest if the challenge facing the use of instructional materials by geography teachers is to be addressed.

RECOMMENDATIONS

Geography as a school subject is declining and one reason for its decline is the challenges facing the use of instructional materials by geography teachers in Senior Secondary Schools in Kenema City. The situation can be addressed with the application of the following practical recommendations:

- Government and its partners should support Senior Secondary Schools in Kenema City with instructional materials and or provide geography resource rooms in schools or centres equipped with instructional materials to be accessed by schools.
- Geography teachers should engage in instructional material production making use of their local community resources and school authorities should make sure that the available instructional materials are effectively utilized in geography lessons and safely kept.
- The curriculum of geography should be reviewed in making sure that GIS, Remote Sensing and other computer packages are included. This can go along with seasonal training of geography teachers in the use and application of the packages so that geography education should match with those provided in other countries.

- The effective use of Geography instructional materials should integrate technology into classrooms; by so doing the geography teacher will no longer have worries about lack of resources. Almost everything needed will be online and this will help decrease their stress.

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