

Assessment of the Decline of Geography as a School Subject at Senior Secondary School Level in Kenema City, Eastern Sierra Leone

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Abstract— *Geography was one of the major subjects offered in Sierra Leonean schools in the 1980s but has seen a downward turn in most of the schools in the country in the recent past. Educationist has raised some concerns in recent times over the declining interest of academics (geographers) and the negative impacts it would have on the quality of geography taught in schools. This article assess the decline of geography as a school subject at Senior Secondary schools in Eastern Sierra Leone. The objective is to assess pupil's perception and teachers, school administrators and inspectors' perception on the decline of geography as a school subject in Senior Secondary School (SSS) in Kenema City, Eastern Sierra Leone. The study community was selected by purposive sampling because there were many SSS offering geography either as compulsory or elective. The respondents were selected by simple random sampling. Five (5) SSS were selected and from each school fifteen (15) pupils offering geography were selected which totals seventy-five (75) pupils. They form the respondents of this study. They responded to the first objective. Fifteen geography teachers were also sampled, three (3) from each school, three (3) school administrators and two (2) inspectors of schools who were supervising teachers from the selected schools. In total, twenty (20) respondents were also selected to respond to the second objective. They form the discussion forum. Results reveal that, geography as a school subject is declining speedily in the selected schools due to reasons ranging from inappropriate use of teaching methods to the attitude of geography teachers skipping challenging topics according to the pupils. On the part of geography teachers, school administrators and inspectors, reasons for the decline of geography as a school subject ranges from the curriculum delimiting geography as an elective to its integration into Social Studies as a component. It is concluded that the decline of geography in SSS is been attributed to curriculum changes over the decades, lack of fieldwork, exclusion of surveying and GIS in the curriculum. It is therefore recommended that in-service training be conducted for geography teachers in areas bordering around map work, field work, improvisation of instructional materials, teaching methodology, GIS etc.*

Keywords— *Instructional material, GIS, elective, improvisation, curriculum*

I. INTRODUCTION

Geography as a school subject has a long history in the realms of education and one which is more relevant than ever. Three (3) years before Sierra Leone attained independence, the major outstanding White Paper on Education was published in 1958. The ultimate goal of education according to the White Paper was to establishment of fee-free compulsory education in Sierra Leone (White Paper on Educational Development, 1958). Pupils offered it from Form one to Form five (1-5) in the old

educational system (O' levels). It started experiencing a downward trend when the National Social Studies Programme developed a curriculum of Social Studies integrating other subjects such as History, Political Science, Economics, Geography etc. which were taught in schools and teacher training colleges in Sierra Leone. The introduction of Social Studies by the then 6-3-3-4 system of education in 1993 by the government of Sierra Leone finally wiped out geography as a school teaching subject at Junior Secondary School Level. Geography is now only taught at Senior Secondary Schools, Universities and Polytechnics/Teacher training Colleges Sierra Leone. Even at that it is not offered as a core subject in some schools. Pupils offered it from Form one to Form five (1-5) in the old educational system (O' levels). It started experiencing a downward trend when the National Social Studies Programme developed a curriculum of Social Studies integrating other subjects such as History, Political Science, Economics, Geography etc which were taught in schools and teacher training colleges in Sierra Leone. Geography is now only taught at Senior Secondary Schools, Polytechnics/Teacher Training Colleges (as Social Studies with an advance option in Geography) and in Universities it stands out alone as a discipline. Geography is undergoing paradigmatic shifts as a result of various educational evolutionary processes given birth to numerous education Acts and Policies. Geography was in a healthy state in Sierra Leone, until politics intervened to change the curriculum. The educational system of Sierra Leone especially in the area of teaching geography is at the crossroads; as the educational system of the country continue to undergo dramatic changes in policies, curriculum development and classroom teaching methods and strategies.

II. OVERVIEW OF SIERRA LEONE'S EDUCATIONAL ACTS, POLICIES AND REGULATIONS

It was placed under two broad sectors: Education Acts, Policies and Regulations in Sierra Leone in Colonial era and from Independence to date. Sierra Leone education Acts, Policies and Regulations in Colonial era:

The Development of Government Policy for Education in Sierra Leone 1882-1961. Report on the Development of Education in Sierra Leone, Sessional Paper No. 3 of 1925,

Report for the Education Department, 1943 and 1944, Freetown, Sierra Leone, (1944) was from Education Department at McGill University and was purely British

Curriculum oriented. Report of the Sierra Leone Education Commission, Freetown, Sierra Leone, (1954). Sierra Leone Government (1958) White Paper on Educational Development focused on providing education for Sierra Leoneans that caters for their welfare and the development of their communities as a whole. Report on Education, 1960-61, Freetown, Sierra Leone.

Sierra Leone Education Acts, Policies and Regulations from Independence to date:

Sumner, D.L. (1963). Education in Sierra Leone. Freetown: The Bunumbu Experience, Sierra Leone (1977) aimed at a personal requirements for multi-purpose community education. University of Sierra Leone, (1976). Sierra Leone Education Review: All our Future: Final Report. UNESCO. (1983). Sierra Leone: Primary school teachers for rural areas. White Paper on Educational Policy (1970) was a derivative of Article 26 of the United Nation's Universal Declaration of Human Rights. The Sierra Leone Educational Review (1976). Hawes, H.W.R. (1976). Curriculum and curriculum development in Sierra Leone. The National Teaching Syllabus for Secondary Schools (National Curriculum Development Centre) (1985). Government of Sierra Leone (1995). New Education Policy for Sierra Leone: Government Printing Department, Sierra Leone aimed at the integral development of an individual. The National Council of Technical and Vocational and Other Academic Awards Act (2001a). The Polytechnic Act (2001b). The Tertiary Education Commission Act (2001c), The Education Act (2004a), The Universities Act (2005), and Sierra Leone Education Sector Plan 2007-2015 which was a roadmap to a better future in the educational sector in Sierra Leone.

The Code of Conduct for Teachers and Other Education Personnel (2009), The National Educational Policy of Sierra Leone (2010) aimed at developing citizens that can contribute to building a cohesive, healthy, and strong nation with a sustainable and dynamic economy, National Policy on Teacher Training and Development in Sierra Leone (2010) and National Policy on Technical and Vocational Education and Training (2010b) (TVET). Sierra Leone Educational Sector Plan 2018-2020, The Code of Conduct for Teachers and Other Education Personnel (2019) a revised edition, The University Act of Sierra Leone (2021) which is an Act to reconstitute the University of Sierra Leone, to establish the Njala University, to provide for the establishment of other Public Universities and Private Universities and to provide for other related matters and a few others. With all these Acts, Policies and Regulations on education system in Sierra Leone, the system is still underdeveloped and an important subject like geography which has survived educational policy changes is declining abysmally. The decline of the 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 as it was captured 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 gain by pupils. In the same vein, Ofsted (2008) postulated similar problems leading to the decline of

geography in United Kingdom Schools. They stated that Geography teachers in the United Kingdom did not make use of maps and field work to progressively build up pupils' skills in gathering data, analysis and interpretation but rather depended on overreliance on textbooks especially non-specialist teachers. Sierra Leone Geography teachers hardly use maps in their teaching let alone take pupils outside the classroom on field trips, excursions and or on environmental site seen which makes pupils active and interested in their own learning process and therefore the subject has faced rapid decline in the distant past. With the importance of geography to Sierra Leone as it presently experience several environmental challenges such as flooding, loss of biodiversity, poor waste management and above all water shortages/scarcity which the subject seeks to address, fewer pupils opt to offer it which also implies to those selecting to study it at Teacher Training Colleges, Polytechnics and Universities in the country. The objective of this study is therefore set to assess the decline of geography as a school subject at Senior Secondary School level in Kenema City, Eastern Sierra Leone.

III. METHODOLOGY

The city of Kenema is found in Eastern Sierra Leone and it serves as the region headquarter for three (3) districts (Kenema Kailahun and Kono). It is situated at the foot of Kambui Hills North Forest Reserve. It lies between latitude: 7° 52' 59.99" N and longitude: -11° 10' 60.00" W. The rainy season in Kenema is hot, muggy, and partly cloudy, whereas the dry season is hot, muggy, and partly cloudy. The temperature normally ranges from 66°F to 93°F throughout the year, with temperatures rarely falling below 60°F or rising over 99°F. The average temperature of the year in Kenema is 78.8°F (26°C). Kenema receives an average of 104.9" of precipitation per year (2664.5 mm). August receives the most precipitation on average, with 17.3" (439.4 mm), while January receives the least, with an average of 0.5". (12.7 mm). In the area of education, the city have several tertiary institutions including the Eastern Technical University of Sierra Leone, College of Business Management and Accountancy, Institute of Public Administration Management Studies etc. There are several Senior Secondary Schools within the city with outstanding academic performances in some subjects at the West African Examination Council (WAEC) with geography having recorded low pupils offering it from Senior Secondary School one (1) to WASSCE level. This study was conducted among major stakeholders dealing with education in the city and more especially geography teaching and learning. They included Senior Secondary School Administrators, Teachers of geography, Pupils offering geography and the School inspectorate of the Ministry of Education. Two sampling procedures were used to sample the respondents. The first sampling procedure used was purposive sampling which was used to select Senior Secondary Schools that were offering geography either as a compulsory subject or who had large number of pupils offering it as an elective. The schools were selected due to the fact that it had all the variables needed for the completion of the study.

Another sampling procedure used was the simple random sampling of pupils offering geography and the number of Schools teaching the subject in the city. Five (5) Senior Secondary Schools (SSS) were selected and fifteen (15) pupils were selected from each of the school totaling seventy-five (75) pupils who were the respondents; three (3) geography teachers from each school which equals fifteen (15); three (3) school administrators and two (2) School Inspectors from the Ministry of Basic and Senior Secondary Education (MBSSE). The school administrators and geography teachers have observed and taught the subject for appreciable number of years and therefore had adequate data/information needed for the completion of this study. The total number of respondents sum up to respondents. For data collection, two (2) methods were employed. The first was questionnaire for all the sampled respondents and the second was discussion guide with the three (3) selected school authorities, five (5) geography teachers; one (1) from each school and the two (2) selected Inspectors of

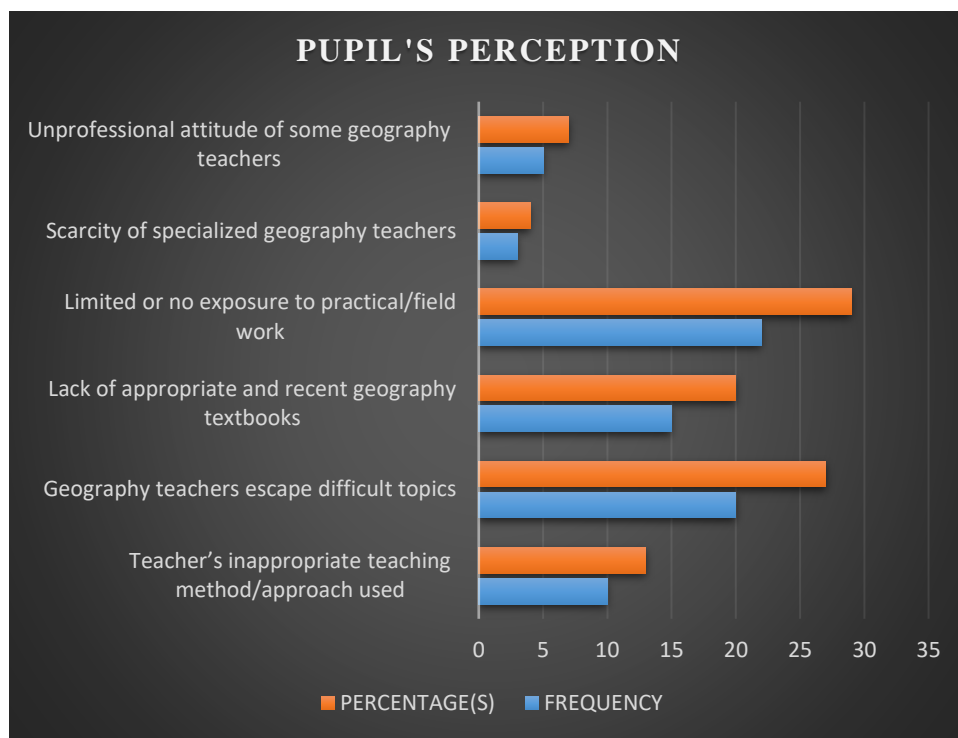
Schools to obtain primary data from the respondents. Data analyzes was done by the use of descriptive statistics. Frequency tables, and percentages were used to present the characteristics of the respondents.

IV. RESULT AND DISCUSSIONS

3.1 Reasons for the Decline.

Reasons for the decline of geography as a school subject in Sierra Leone is analyzed from two main perspective viz: the perspective pupils offering the subject in Senior Secondary Schools (SSS) in Kenema on one hand and geography teachers, SSS administrators and SSS inspectors from the Ministry of Basic and Senior Secondary School Education (MBSSSE) on the other.

3.2 Assessing Pupils' Perception of the Decline of Geography as a School Subject in SSS in Kenema City



SOURCE: Field Data, 2022.

Fig. 1. Assessing pupils' perception of the decline of geography as a school subject in the selected schools in Kenema City.

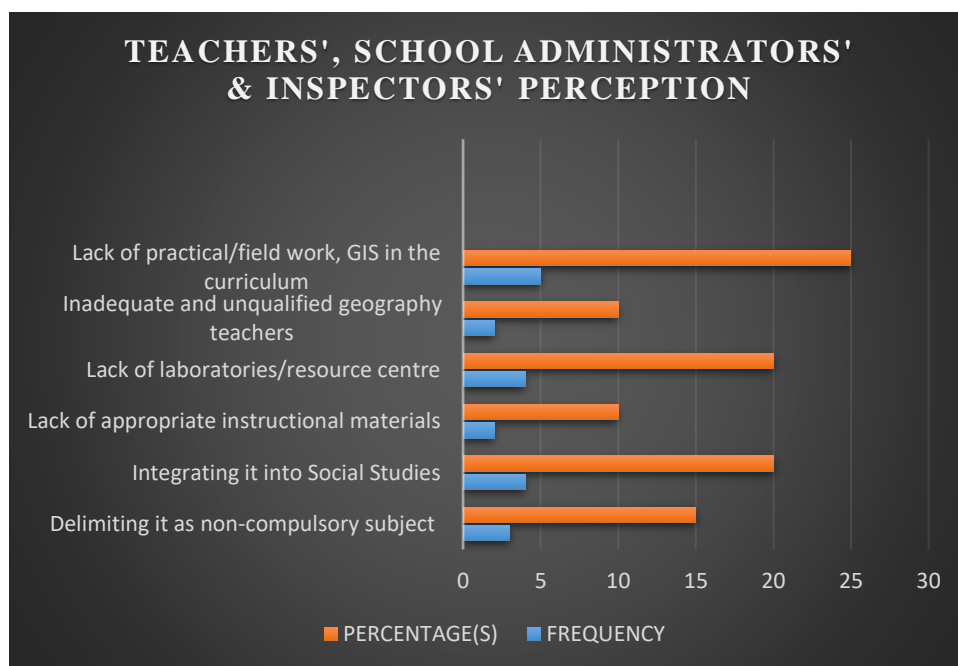
The total number of pupils offering geography selected from the five (5) schools was seventy-five (75). When asked what their perceptions were with regards to the status of geography as a school subjects in their various schools, they all stated that it was declining comparatively to other subjects in their schools. Prominent reason identified by 29% of the respondents was limited or no exposure to practical/field work by geography teachers while 27% indicated the very attitude of their geography teachers for escaping difficult topics in the geography syllabus which were examinable at the end of the term and or at WASSCE level. Difficult areas geography teachers often escape from teaching in the selected schools was

map reading and basic elementary surveying. This is not only peculiar to SSS in Kenema City (Eastern Sierra Leone) but similar situation exist in Nigeria as put forward by Amosun (2016), that Nigerian geography teachers scantily and scarcely teach map reading and pupils are scared of this area. This had cause a decline in geography as most pupils drop it along the school years for other elective subjects. These situations came up strongly during discussions with the school authorities and inspectors of schools that geography teachers in the selected schools have never embarked on field work with pupils offering the subject. The only attempted practical work embarked on was map work which was scantily done at SSS three (3) for less

than a week. This urged many pupils to drop the subject at SSS 1 or 2 level for other elective subject preferably Christian Religious Studies (CRS), Islamic Studies or Economics. Similar situation was reported in the work of Wilmot (2016) in Namibian schools as he pointed out that lack of sources of information and not enough evidence in the teaching of map work are among the aspects that gives geography an insecure status in Namibian schools. The Sierra Leone curriculum for SSS geography seems not to provide directives or guidelines on how geography teachers should carryout fieldwork in their daily teaching work activities, therefore the teachers themselves are at a crossroad. This unfortunate teaching-learning situation totally neglects the point highlighted by Dalton (2001) that if fieldwork is put into practice, it may motivate and consequently involve learners in specific learning activities and stimulate them to study geography. This unique teaching and learning of geography is lacking in the selected schools in Kenema and therefore the subject is abandon by pupils and teachers on the other don't care leading to the decline of this all important subject. However, 20% of the respondents stated lack of appropriate and recent geography textbooks, 13% of them indicated geography teacher's inappropriate teaching method/approach used, 7% pointed at unprofessional attitude of some geography teachers during teaching periods and 3% indicated scarcity of specialized geography teachers in their schools. During discussions, school administrators and inspectors agreed that the selected schools were not equipped with appropriate and recent geography textbooks but pointed at the city library for access to such materials. This was not in line with the work of Usman, K.O & Adewunni, A.O (2015) who postulated that implementation of any curriculum depends on

the quality and quantity of materials available to teachers and students for use in schools. This had negative implication on the pupils as some of the schools were located far away from the city library like the Government Secondary School (GSSK), Holy Rosary Secondary School (HRSS), Ansaru Islamic Secondary School (AISSK) etc and access was another problem highlighted by the pupils. Therefore, they depended wholly on Comprehensive geography materials which were not equipped enough to stand the trials of the geography syllabus. This forced a good number of pupils to drop the subject leading to its decline in the recent past. Pupils reported that most geography lessons were not understood due to inappropriate use of teaching approaches/methods used by geography teachers and above all they were not learners friendly and approachable. This was due to not having specialized teachers in geography to handle some difficult topics and those who opted to teach the subject had lower qualifications or did not specialized in geography at teacher training Colleges, Polytechnics or Universities. This is in line with the work of Adeyemi (2009) who observed that, the decline in the interest in geography in Botswana may be caused by the teachers' attitudes and relationships with learners. Pupils in the selected schools pointed out that teachers gave notes or handouts without explanations, some came to class unprepared therefore responded to pupils' questions unsatisfactorily; this demoralizes their interest in geography.

3.2 Assessing Perception of Geography Teachers, School Administrators and Inspectors for the Decline of Geography as a School Subject in SSS in Kenema City.



SOURCE: Field Data, 2022.

Fig. 2. Assessing geography teachers', school administrators and inspectors perception of the decline of geography as a school subject in the selected SSS in Kenema City.

The total number of respondents was twenty (20) selected thus, 15 geography teachers 3 from each school, 3 school administrators and 2 inspectors.

From the figure above, 25% of the respondents indicated lack of practical/fieldwork and GIS in SSS geography curriculum while 20% pointed out integration of geography into Social Studies and lack of laboratories/resource centre for geography in the selected schools respectively. During discussion, the school administrators pointed out that geography teachers have not embarked on any practical/field work for the past decades for lack of expertise, cost involved etc. Although a considerable amount of time and money is involved in field work, it capacitates learners' critical thinking and independent learning skills. This is in line with Michine (1998), who opines that geography teachers in general are willing to use field work as part of their pedagogy because they feel that their learners need hands on, real life experiences or to examine applications of geography concepts which augment their classroom studies. From discussions, the school inspectors agreed that integration of geography into the Social Studies curriculum narrowed the content of the subject and a few people opted to pursue it as an advanced option. Those who did Social Studies with other options like government, economics, history but not geography as an advance option take up the challenge of teaching the subject with inadequate knowledge, lack of expertise, etc have speedily contributed to the decline of geography in the selected SSS in Kenema city. In Islamic Secondary School, only a teacher specialized in geography was identified but three (3) teachers who studied Community Development Studies with an advance option in Environmental Studies opted teaching geography with limited knowledge and preparedness; hence a cause for the decline of the subject. Similar situation existed in other schools in the city. However, 3% of the respondents stated delimiting geography as non-compulsory subject in SSS while 2% indicated lack of appropriate instructional materials and inadequate and unqualified geography teachers in the selected SSS respectively. As long as geography remain to be an elective, many pupils will not select it or may select it and drop it for alternative subjects as they progress in the SSS due to poor lesson delivery, inadequate learning materials, unprofessional attitude of geography teachers etc. This is in line with the work of Akintade (2011) based on his studies in Nigeria schools, which found out that learners opted to choose Christian Religious Studies/Islamic Studies or Economics instead of geography, because their parents wanted education to be focused more on religion and therefore, this led to a sharp decline in the number of learners choosing geography. The selected schools lacked appropriate instructional materials for geography teaching. During discussions, the school administrators indicated that their schools lack effective and appropriate instructional materials and that the MBSSE is yet to provide, a situation the inspectors agreed. A trained and qualified teacher in geography should always improvise learning materials but it was not visible in the selected schools due to lack of expertise in its preparation, laziness, lack of interest, lack of monitoring by the heads/inspector of schools. This added to the speedy decline of geography and pupils dropping

it for other subjects in the selected schools in Kenema City. This same situation was addressed by the work of Kimayu (2012) when he elucidated that geography teachers as they teach should keep in mind both how and what they taught with. This is because leaning would be passive and boring if learning resources were not incorporated, effectively organized and explained in the learning process. Although Alcorn (2010) suggested that in the absence of appropriate geography instructional materials, teachers should use teacher centred approach teaching methods. This can even worsen the situation as most of the concept will be taught in abstract, making it difficult for pupils to understand; a reason for pupil's selection of alternative subject instead of geography leading to its decline. Awiti (2010) rather suggested that learner centred approach is appropriate for teaching and it might only be suitable and effective when applied correctly. However, the work of Ofune (2001) enforced the appropriate use of instructional materials no matter the teaching method used if effective teaching and learning is to be achieved. To him, teaching-learning in secondary schools can be effective through the use of different types of materials that guide the teacher in explaining topics to the students effectively and efficiently. Discussions with the inspectors of schools stressed the point that in-service trainings are conducted for teachers to capacitate them better in the classroom in various disciplines but teachers don't apply what is learnt in their various schools. This have not only contributed to the decline of geography as a single subject but the entire school teaching subjects which is a cause of concern to MBSSE.

V. CONCLUSION AND RECOMMENDATION

Geography as a field of study provides a wide range of opportunities to pupils after SSS education. With all this importance nature of the subject, it is declining speedily in our school system. It is evident that the decline has been attributed to curriculum changes over the decades. Curriculum changes that are taking place in our education system are causing deep seated apprehension as there are uncertainties about the effects these changes would have on education. Now the concern is over whether or not geography as a school subject should remain as an elective or Social Studies should continue to incorporate geography even at SSS level. There are problems of lack of geography instructional materials, resource centre, scanty staff trained and specialized in geography and teachers dodging challenging topics such as map work and the subject taught as an elective has contributed to its rolling decline. Therefore it is recommended that in-service training be organized for geography teachers on instructional material improvisation, teaching-learning methods and field work. In addition, resource centre/school meteorological station be constructed in schools, trained and qualified geography teachers be employed and above all GIS be included in the geography curriculum for SSS.

REFERENCES

- [1]. Alcorn (2010). Better teaching in Secondary Schools. New York: Holt Rinehart and Winston.
- [2]. Awiti (2010). The use of discovery methods in our schools.

- [3]. Amosun, P.A (2016). Why Nigerian geography teachers scarcely and scantily teach map reading and why students are scared of it. Also available @ <https://www.researchgate.net/publication/305768206whyNigeriangeographyteachersscarcelyandscantilyteachmapreadingandwhystudentsarescare dofit>. Retrieved on
- [4]. Akintade, B. O (2011). Considering the determinants of selecting Geography as a discipline: The case of Senior Secondary School students' in Ilorin, Nigeria. Also available @ <https://www.yumpu.com/en/document/view/43256153/considering-the-determinants-of-selecting-geography-as-a-discipline>. Retrieved on
- [5]. Adeyemi, M.B (2009). Factors influencing the choice of geography as an Optional an Option Subject: A Case of a Senior Secondary School in Botswana. Also available @ <https://www.tandfonline.com/doi/abs/10.1080/09718923.2009.11892727>. Retrieved on
- [6]. Average weather in Kenema, Sierra Leone-Year Round. Also available @ <https://weatherspark.com>. Retrieved on
- [7]. Aderogba, K.A. (2011). Laboratories and Sustainable Teaching and Learning about Senior Secondary School (SSS) Geography in Nigeria. Proceeding of the 2011 International Conference on Teaching and Learning and Change.
- [8]. Dalton, R.T (2001). What do they bring them with? The fieldwork experiences of undergraduates on entry into higher education?
- [9]. Government of Sierra Leone (1995). New Education Policy for Sierra Leone: Government Printing Department, Sierra Leone.
- [10]. Government of Sierra Leone (2001a). The National Council of Technical and Vocational and Other Academic Awards Act: Government Printing Department, Sierra Leone.
- [11]. Government of Sierra Leone (2001b). The Polytechnics Act: Government Printing Department, Sierra Leone.
- [12]. Government of Sierra Leone (2001c). The Tertiary Education Commission Act: Government Printing Department, Sierra Leone.
- [13]. Government of Sierra Leone (2004a). The Education Act.
- [14]. Government of Sierra Leone (2005). The Universities Act: Government Printing Department, Sierra Leone
- [15]. Government of Sierra Leone (2010b). National Policy on Technical and Vocational Education and Training (TVET).
- [16]. Hawes, H.W.R. (1976). Curriculum and curriculum development in Sierra Leone. London:
- [17]. Department of Education in Developing Countries, University of London Institute of Education.
- [18]. Kimayu, R.M. (2012). Factors influencing performance in geography in Kenya Certificate of Secondary Education (KCSE) in Enzau, Makueni County. Unpublished M.Ed Thesis, Kenyan University.
- [19]. Ministry of Education, Science and Technology (2007). Sierra Leone Education Sector Plan 2007-2015: A roadmap to a better future.
- [20]. Ministry of Education, Youth and Sports (2009). The Code of Conduct for Teachers and Other Education Personnel.
- [21]. Ministry of Education, Youth and Sports (2019). The Code of Conduct for Teachers and Other Education Personnel.
- [22]. Ministry of Education, Youth and Sports (2010). National Policy on Teacher Training and Development in Sierra Leone.
- [23]. Michine, M. (1998). Factors influencing secondary science teachers to organize and conduct field trips.
- [24]. National Education Policy (2010). Ministry of Education, Youth and Sports. Also available @ <https://mbsse.gov.sl/wp-content/uploads/2020/03/2010-National-Education-policy.pdf>. Retrieved on
- [25]. Ofsted, (2008). Geography in schools: changing practice (070044). Also available @ www.ofsted.gov.uk/publications/070044a. Retrieved on
- [26]. Ofune (2001). Teaching practice, a guide for student and teachers.
- [27]. Sierra Leone Educational Sector Plan 2018-2020. Also available @ <https://globalpartnership.org/sites/default/files/2018-10-sierra-leone-esp.pdf>. Retrieved on
- [28]. The Development of Government for Educational in Sierra Leone
- [29]. The Sierra Leone educational review (1976). Sierra Leone Government.
- [30]. United Nations Universal Declaration of Human Rights. Article 26.
- [31]. White Paper on Educational Development (1958). Sierra Leone Government.
- [32]. White Paper on Educational Policy (1970). Sierra Leone Government.
- [33]. Sierra Leone Government. (1958). White Paper on Educational Development. Freetown: Government Printing Department
- [34]. Sumner, D.L. (1963). Education in Sierra Leone. Freetown: The Government Printer. The Bunumbu Experience, Sierra Leone. (1977). Bunumbu Times. Also available @ <http://unesdoc.unesco.org/images/0003/000370/037009eb.pdf>. Retrieved on
- [35]. University of Sierra Leone. (1976). Sierra Leone Education Review: All our Future: Final Report.
- [36]. UNESCO. (1983). Sierra Leone: Primary school teachers for rural areas. Project Findings and Recommendations. Paris: UNDP, 1983. UNDP/SIL/73/009. Also available @ <http://unesdoc.unesco.org/images/0005/000560/056049eb.pdf>. Retrieved on
- [37]. Usman, K.O & Adewunni, A.O (2015). Factors responsible for inability of teachers to improvise instructional materials for the teaching of physics. Also available @ <https://www.eajournals.org/wp-content/uploads/Problems-of-Improvising-Instructional-Materials-for-the-Teaching-and-Learning-of-Physics-in-Akwa-Ibom-State-Secondary-School>. Retrieved on
- [38]. Wilmot, P.D. (2016). Advancing Geography education in Southern Africa: the role of the Southern African Geography Teacher's Association.