Evaluation of the Relevance of Senior Secondary Schools Geography Topics in Addressing Contemporary Societal needs in Kasama District of Northern Zambia.

by

Langi Cecilia

(22000603)

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This dissertation of Langi Cecilia is hereby approved for partially fulfilling the requirements for the award of degree of Masters of Education in Geography Education of the university of Zambia.

Examiner 1

Name ……....

Signature ……..... Date: …….

Examiner 2

Name: ……

Signature: …… Date: ……

Examiner 3

Name: …….

Signature: …… Date: ……

Chairperson of Board of Examiners

Name: ……..

Signature: ……. Date: ……

Supervisor:

Name: Dr. Kaiko Mubita

Signature: …….. Date ……

Co- Supervisor:

Name: Dr. Kasonde Mundende

Signature…… Date…….

DEDICATION

I dedicate this dissertation to my children Mwape, Jay, Gracious, Berakah and Jemimah the dedication is yours for your understanding all the times that I left you alone to pursue my studies. This dedication goes more especially to Francis my husband for taking care of the children while I was away from home and for the financial, spiritual, emotional and moral support you always gave to me throughout this study. I thank God Almighty for giving me such a wonderful and an understanding family.

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ABSTRACT

For any subject to remain relevant in the system, it has to meet the needs of society and as Zambia continues to evolve in the 21st century, it is essential to critically examine the contents of the senior secondary school geography curriculum to assess if it contextually addresses the modern societal needs. Thus, the purpose of the study sought to evaluate the relevance of senior secondary school geography topics in addressing contemporary societal needs in Kasama District, Zambia. The study employed an evaluative case study in a qualitative research design. A homogeneous and expert purposive sampling techniques were utilized in selecting participants and schools were data was collected this was so to ensure representation across various demographic groups and to target individuals with expertise and specialized knowledge in geography education. A cyclic evaluative theoretical model called the Context, input, process and product (CIPP) was employed to evaluate the relevance of geography to societal needs Data were collected through in-depth interviews conducted with ten teachers and three lectures, alongside a focus group discussion comprising ten students taking geography as a course of study. Primary data analysis applied were thematic analysis and document analysis. Inductive thematic analysis was used because it allowed for identification of recurrent patterns and themes within the collected qualitative data providing insights within the perceived relevance of geography topics in addressing societal needs. Furthermore, document analysis involved examining important documents in the curriculum, such as senior secondary school geography syllabus, geography text books and other relevant materials to further contextualize the discoveries and evaluate the alignment between the curriculum and societal needs. The findings of the study clearly suggested that some senior secondary school geography topics were irrelevant to the needs of society. More so, the topics that look at alien countries and physical geography were abstract to their understanding of concepts being taught as well as societal challenges. The findings also shed more light on the effectiveness of geography topics in preparing students meet real world challenges in Kasama district. In assessing the practical application of geography education in addressing societal issues, this study contributes on ongoing efforts to enhance societal impact of geography education. The insights generated in this research can inform curriculum developers to ensure that geography curriculum remain responsive to the changing needs of the needs of society in Kasama district.

Key words: Evaluation, societal needs, relevance, senior secondary geography topics.

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LIST OF ABBREVIATION AND ACRONYMS

ASD:	Agenda 2030 for sustainable development
CDC:	Curriculum Development Centre
ECF:	Education Curriculum Framework
EOF:	Educating our future
DEBS:	District Education Board Secretary
ECZ:	Examination Council of Zambia
FDGs:	Focus Group Discussions
MOE:	Ministry of Education
MCT:	Ministry of Communications and Transport
NGOs:	Non-Governmental Organizations
SDGs:	Sustainable Development Goals
UNESCO:	United Nations Educational Scientific and Cultural Organization
USAID:	United States Agency for International Development
VVOB:	Dutch abbreviation for education for sustainable Development
WAEC:	West African Examination Council

CHAPTER ONE: INTRODUCTION

1.1. Overview

This chapter introduces the study, which is the background of the study, the research problem, the research aim, research objectives, the research questions and significance of the study. The chapter evaluates the extent to which Senior Secondary School Geography topics address contemporary societal needs in Kasama district, it begins by highlighting the importance of Geography education in addressing real-world issues and promoting sustainable development.

1.2 Background of the study

Geography education at the senior secondary school level plays a crucial role in shaping students' understanding of the world around them and preparing them to tackle contemporary challenges. As Zambia continues to evolve in the 21st century, it is essential to critically examine the senior secondary school geography curriculum (2013) and its relevance to modern societal needs. This study sought to evaluate the significance of critiques of senior secondary school geography topics in Kasama` and how they can align with the country's contemporary societal requirements.

For any subject to stay relevant in education, it should address societal challenges, as well as national development goals. In addition to that, the subject should be in alignment with the curriculum assessment policy which determines what type of content should be taught to learners for education to meet its intended purposes (Raselimo & Thamae, 2018).

Education is seen as a vehicle that helps reduce poverty, which is defined as “a state of being in which one is unable to meet his/her needs” (Watt, 2000:15). The reason why geography topics should be of quality and relevant to society as stipulated by sustainable development goals and education curriculum framework is to help combat poverty, inequalities and solve society’s problems (SDGs; 2017; MOE; 2013). Education is a basic need for each individual and therefore, what is taught should be relevant to learners and societies where they belong. In education, the term relevance typically refers to learning experiences that are either directly applicable to the personal aspirations, interests, or cultural experiences of students (personal relevance) or that are connected in some way to real-world issues, problems, and contexts (life relevance) (Stuckey et

al., 2013). It is also a means for enhancing the well-being and quality of life for the entire society and the nation.

This study is aligned to Sustainable development goals number four (4) and the national policy on education, Educating Our Future (1996), which states that quality education is where all learners should be facilitated in the attainment of the highest standards of learning through teaching of excellent quality. MoE (2006: 4) adds that;

> *Quality is brought about by maximizing the efforts of all those responsible for the education of learners and by coordinating all the structures of the system so that centres of education, from pre-school to university, are places where effective teaching, learning and research take place and where the highest standards of achievement, in accordance with ability, are obtained by every student.*

Hence, quality education is a fundamental human right, enshrined in the UN Convention on the Rights of the Child, which is the most widely ratified human rights convention in history. The preparation of students for an active future of preserving the environment, while enjoying its resources is achievable through secondary school geography learning and relevance of topics because it enables learners to acquire knowledge and develop positive attitudes and inquiry skills, critical thinking and decision making, (Santos, 2017).

Macalester (2011) observed that Geography possesses an integrated approach to human knowledge and has a global view point. Geography has been fashioned to help learners cope with the demands and challenges of modern world and also the realization that the world has evolved into a global village. The geographical Association (2011) also underscores the importance of Geography as having a distinctive role to play in the school curriculum but notes that its potential and promise can be compromised if it is seen only as body of subject "knowledge-to-be-delivered" but instead should be seen as a resource that can enable students to better understand the world and find their place in it.

The main work of teachers is to teach, or to organize learning experiences to the understanding of learners yet some of the topics taught to learners seem not to be applicable to real life situations

present in societies. (MOE, 2015), notes that the curriculum revision of 2013 led to re-organization and rationalization of the topics and content while also making a conscious effort to respond to pertinent contemporary issues in the society. The West African Examination council (WAEC) syllabus for example contains topics such as principles of elementary surveying; Geographic Information System (GIS); climate elements, classification and climate change; geo-political issues; field work, and other topics that touch on diverse professions (Aderogba, 2012).

In the era of rapid technological advancements, it is crucial to assess whether the senior secondary school geography curriculum incorporates modern tools and techniques, such as Geographic Information Systems (GIS), remote sensing, and other digital mapping technologies. Thus, examining whether the curriculum adequately prepares students to effectively use these technologies to address real-world geographical challenges is vital.

MOE (2013:9) states that "In the recent years, there has been a concern that teaching was not responding to the needs of the society". According to Moseley (2005; 93), geography is "the study of places and the relationships between people and their environments". As such, the importance of geography does not just come from understanding the physical properties of the world, although that is of course important in its own right and it also comes from how it connects people to their natural resources and the environment. The ability to understand this connectedness makes geography an important part of education.

According to VVOB (Dutch acronym) for education for sustainable development (2021:2), contend that:

> *In order to equip youths with the tools to have ownership over their futures, ministries of education are investing in secondary education system reforms to include transferable, digital and entrepreneurial skills.*

Vision 2030, (2016; 12) also stipulates that "Education is critical in enhancing a country's social economic development as it builds people's abilities in terms of skills and the ability to receive and process information for livelihood choices. The statements above correspond to geography education being an important part of education is set out to equip learners with lifelong skills to help them conquer life challenges.

According to Phiri's (2011) study, Sustainable development is a critical aspect of modern societal needs, encompassing environmental, social, and economic dimensions. However, it is not yet embedded in the current geography curriculum to adequately address topics related to sustainability, climate change, resource management, and the promotion of environmentally friendly practices. Geography education should not only focus on physical landscapes but also encompass human geography, including social, cultural, and economic aspects.

Addressing these critiques and updating the senior secondary school geography curriculum in Zambia to better align with modern societal needs can contribute to equipping students with relevant knowledge and skills that are essential for their personal development and the sustainable development of the nation as a whole. Therefore, there is need to evaluate senior secondary school geography topics for understanding and addressing the challenges facing Zambian society today.

Studies have also been conducted by researchers all over the world, Africa, the sub regions and Zambia in particular on senior secondary school geography curriculum covering areas such as implementation, perception, effectiveness and effects of the geography curriculum on leaners, teachers, schools, colleges and universities but none of studies have taken keen interest on critiquing the senior secondary school geography topics in relation to modern societal needs in Kasama district of Northern Province, Zambia. By addressing global issues, embracing local context, and promoting sustainable development, the revised curriculum can play a pivotal role in nurturing a generation of informed, responsible, and proactive citizens capable of addressing Zambia's present and future societal needs. As such, the content of the revised senior secondary school geography curriculum needs to be evaluated to find out whether the topics contained therein correlates much with the current societal needs.

1.3. Statement of the problem

Geography education is essential for equipping students with the knowledge and skills to address contemporary societal challenges (Phiri, 2011; Kent,2018). Despite, changing environments due to natural and anthropogenic influence, there has been no corresponding change in the contents of geography curriculum to contextually fit it with contemporary social environmental needs (Kant, 2018, Haubert & Milson, 2017, Gao & Zhu, 2020).

Similar studies such as those done by Habowa (2007), which focused on the 'Evaluation of the implementation of the 'new' Zambian High School Geography Syllabus in rural high schools: The case of Mkushi District, Zambia'; Mulemi (2011), which dealt with Effects of the 'New' Zambian High School Geography Curriculum on Learners, Mundende (2007) Implementation of geography field project and Yasar and Seremet (2009) who studied 'An Evaluation of Changes to the Secondary School Geography Curriculum in Turkey in 2005' did not in any way deal with evaluating Senior Secondary Schools Geography topics in Addressing Contemporary Societal needs in Kasama District, Northern Province, Zambia.

The geography curriculum might be too focused on traditional topics and may not provide students with skills and knowledge to address issues facing society. Thus, this study sought to evaluates the extent to which the curriculum aligns with modern societal needs in Kasama district.

The implications are that, if this study was not carried out not then, Zambian senior secondary schools' curriculum would continue containing outdated topics with no bearing or benefit on the societal needs. Geography education may remain outdated, failing to address contemporary issues and challenges thereby remaining irrelevant. The other implication is that there may be a skill gap meaning that learners may not acquire essential competences, knowledge and skills required for workforce and societal engagement. There may be disconnection from real-world issues if the study is not conducted geography may not connect students to local and global concerns. Further, this may further result in a gap between the knowledge imparted in the classroom and the practical application of geography in addressing real world problems in the local context if not addressed. This becomes a problem because learners going through such a curriculum, would not experience the real geography as by their counterparts. Graduates may not possess the necessary geographic literacy to participate in informed decision making on environmental, economic and social issues. Geography education may inform sustainable development initiatives which may be over looked without relevant research. Therefore, conducting a study on evaluation of senior secondary school geography topics to societal needs can help mitigate the above implications and ensure geography education remains relevant, effective and beneficial for students, society and the economy.

1.4. Purpose of the Study

The purpose of this study was to evaluate the relevance of the senior secondary school geography topics and determine their effectiveness in addressing modern societal challenges.

1.5. Objectives of the Study

The objectives of this study were to:

i. evaluate the relevance of senior secondary school Geography curriculum (2013) in addressing societal needs in Kasama District.

ii. explore the geography topics to be included and excluded in the senior secondary school geography syllabus in Kasama District.

iii. propose a framework for geography curriculum that contextually responds to socio-environmental needs of Kasama District.

1.6. Research Questions of the study

The following questions were asked in the research;

i. How relevant are the senior secondary school geography topics in the geography curriculum (2013) in addressing contemporary societal needs in Kasama District?
ii. Why should some topics be included and excluded in the senior secondary geography syllabus in Kasama District?
iii. What framework for geography may contextually respond to socio-environmental needs of Kasama District?

1.7. Significance of the Study

The significance of this study lied in its potential to bring about positive changes in the senior secondary school geography curriculum of 2013. By identifying areas for improvement, the research was hoped to assist education policymakers, curriculum developers and educators in adapting a curriculum that better meet the needs of the local community and broader society. Enhancing the relevance and practicality of geography topics could result in students who are better equipped to tackle real-world challenges, contribute to sustainable development and promote positive societal change in the Northern Province of Zambia.

The findings of the study were hoped to be of great benefit to the new geography curriculum revision as it highlighted what was to be excluded and included in the ideal curriculum. Data gathered was hoped to enable stakeholders to reconsider the relevance and quality of the topics to be included in the new geography curriculum as stipulated in the national education policy

"Educating our Future" and in the Zambia Education Curriculum Framework 2013 (MOE, 1996; 2013).

The current study might contribute to addressing modern social environment needs that had been left out of the curriculum that would help learners acquire lifelong skills for socio-economic development. The need for this paper aroused due to insufficient scholarly attempt that had critically evaluate the Zambian senior secondary geography topics in relation to socio-environmental needs as stipulated by the sustainable development goals number 4 (Quality Education), SDG 11 (Sustainable Cities and Communities) as well as SDG 13 (Climate change action) and the Zambia education curriculum framework 2013.

1.8 Operational Definitions

The definition of terms is important in understanding any research study. Therefore, the terms below were defined operatively according to the meaning assigned to them in this study.

1.8.1. Geography Topics: Geography is one of the optional subjects being offered in many public and private schools in Zambia. In this study, geography was the study of diverse places and spaces on earth's surface and their interactions or relationships between people and their environments. Furthermore, Geography topics in this study were the contents of the syllabus taught to learners to equip with knowledge, skills, values and attitudes to solve socio-environmental issues in the societies where they belong.

1.8.2. Socio-environmental: Socio-environmental (S-E) in this study is a system which refer to a group of humans, social elements and processes that interact with each other and nature. They are more formally defined as complex systems of tight linked social and environmental subsystems.

1.8.3. Relevance: solutions for and changes to the education system is based on the real needs of a country and/or community. Relevance in this study was the concept of one topic being connected to another topic in a way that made it useful to consider the second topic when considering the first. Relevance meant "being practical and especially social applicability" of the topics in

providing skills to learner. In this study relevance looked at the value of the topics to learners and society's immediate environment.

1.8.4. Quality: Most if not all policies formulated internationally and locally center on quality education. All learners should be facilitated in the attainment of the highest standards of learning through teaching of excellent quality. Quality in this study was brought about by maximizing the efforts of all those responsible for the education of learners and by coordinating all the structures of the system so that centers of education, from pre-school to university, are places where effective teaching, learning and research take place and where the highest standards of achievement, in accordance with ability, are obtained by every student.

1.8. 5. Society: A society is a group of individuals involved in persistent social interaction, or a large social group sharing the same spatial or social territory, typically subject to the same political authority and dominant cultural expectations. Society in this study refers to a group of people living as a community or an organized group of people for a common purpose.

1.8.6. Curriculum: curriculum meant the outline of concepts taught to students to help them meet the content standards. In this study a curriculum was a course of components of study of the school curriculum

1.8.7. Contemporary issues in Geography: Contemporary geography deals with the existing patterns of spatial differentiation of phenomena. In this study, Contemporary issues in geography looked at changes in social patterns in comparison to what originally existed, such as changes in landform, climate, environment, culture and many more. Geography should integrate current and contemporary issues such as education for sustainable development, climate change, environmental sustainability, geographical information systems (GIS) and remote sensing.

1.9 Theoretical Framework

The study was informed by the context, input, process and product (CIPP) theoretical lens by Stufflebeam and Shrinkfield (2007). Review and improvement to geography curriculum was necessary in order to keep up with the current and contemporary requirements of today.

CIPP is a cyclic evaluation model used in judging a program's value, in this case geography topics. The model was used for evaluating the quality and relevance of geography topics to modern societal needs in Kasama District. CIPP evaluation model could modified a program at any time by detecting errors or deficiencies at each stage by proving information on decision making about the program planning, structuring, executing and improving as well as evaluating activities. As time changes and education environment changes along with the students, education always possesses an unending possibility of change.

This theory therefore, was used to obtain information pertaining to the quality and relevance of the senior secondary school geography topics to societal environmental needs and also provided useful information for making decisions on how best to improve learner skill acquisition and inclusion of relevant omitted topics and contemporary issues to the geography curriculum.

1.9.1. Context Evaluation

As observed by Stufflebeam & Shrinkfield (2007), the context evaluation was the stage where evaluation meant to provide the basis for determining the decisions about the formulation of a given program. As regard to this study, context evaluation was used to understand the rationale for determining the relevance of geography content that would lead to evaluation of topics in the senior secondary geography curriculum and topics to be included and excluded.

The rationale according to this study was established as being the need to have senior secondary school geography topics that would be of quality and relevant to the needs of the society. It is further ascertained, by Stufflebeam & Shrinkfield (2007) that context evaluation would also ask the question like 'what needs to be done?' It was to this effect that, this type of evaluation would be used to evaluate the relevance of the topics in senior secondary geography and determine improvements to the problems faced. Thus, it was the context evaluation principle that guided this study in evaluating the relevance of the topics or content taught to learners in terms of knowledge, values, attitudes and skill acquisition as well as value it in accordance to societal needs.

1.9.2 Input Evaluation

Input evaluation, according to Stufflebeam & Shrinkfield (2007), was used to devise a program strategy that would be environmentally, economically, socially, politically and technologically

secured, thus it would assess the current curriculum and propose topics that are receptiveness to needs of society and their feasibility to learner skill acquisition. Senior secondary school geography syllabus should be transformed from the 'ubiquitous and irrelevant content memorization to more focused, skillful, purposeful and resource-based content.

In other words, Input Evaluation guided this study in establishing the extent to which current geography topics met the needs of the learners in after school life and contribution to society well-being. Hence, the topics that would be added to senior secondary school geography would be established. Furthermore, Input Evaluation directed this study to focus on current societal needs, enlighten communities on landscape changes and provide value addition to social environmental sustainability.

1.9.3. Process Evaluation

Process Evaluation is another component of the CIPP model, which works to coordinate and strengthen the program activities. Thus, it focused on the evaluation of the quality and relevance of geography topics to societal needs. This study used the Process Evaluation to determine how geography topics helped learners acquire long life skill to sustain themselves and their communities. Thus, it would be used to obtain information pertaining to the challenges and threats of learners' progress in communities they live.

Evaluation further, guided the study in the assessment of how the implementer to the curriculum in that case, who were teachers, accepted the topics and their ability to carry out their roles of imparting relevant and quality education to learners through learning geography topics that would provide the learners with skills, values and change of attitude as well as address societal needs.

Of importance was that, this component of the evaluation theory was used to provide feedback to curriculum designers and developers at Curriculum Development Centre (CDC) about the relevance of some topics that might have been left out of the syllabus and those that needed to be included in the curriculum.

1.9.4 Product Evaluation

Product Evaluation was used to determine whether the topics in question would be worth continuing or modifying. Thus, it would give guidance through determining the results obtained in relation to skill acquisition and environmental sustainability. The product evaluation therefore,

looked at how best the needs of the learners as well as society would be addressed and what could be done about the contemporary issues and ways of incorporating them in the already existing topics.

The incorporation of product evaluation guided the study in the analysis of skills, knowledge and attitudes of people in order to attain social- environmental sustainability. Teachers, MOE, other stakeholders and community members would be informed towards positive contribution to inclusion of current and contemporary issues in line with the dynamism of knowledge needed by society and the nation as a whole. This theory was therefore, appropriate to this study as it advocated for inclusion of relevant content in the geography curriculum that would address social Environmental challenges faced by many communities thus CIPP theory helped in making topics relevant to the society.

1.10 Justification for the use of CIPP theory

The senior secondary School geography education involves complex interactions between students, teachers, curriculum and societal needs, therefore, a comprehensive evaluation framework is required to assess the effectiveness of geography education in addressing contemporary societal needs.

The CIPP model was relevant in the study because it provided a holistic evaluation framework that considered context, input, process and product, enabling a comprehensive assessment of geography topics. The CIPP model aligned with the study's objectives which evaluated the relevance of senior secondary school geography topics in addressing contemporary societal needs. The framework was used because of its flexibility and adaptability in allowing its application in various educational context including geography education.

The CIPP model provided a comprehensive understanding of the strength and weakness of geography topics in addressing contemporary societal needs. The model helped to identify areas for improvement in geography education by enabling targeted interventions to enhance its effectiveness. The model also provided a framework for evaluating the effectiveness of geography education enabling informed decision making by educators, policy makers and other stakeholders.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1. Overview

This chapter reviewed literature related to the problem under study. It gave the definition of concepts relevant to the study undertaken in this regard, the relevance of senior secondary geography topics to societal needs and how current and contemporary issues can be incorporated in the geography curriculum in order to meet the society's current needs.

2.2. Concept of Relevance and Quality of education

MOE (2006) on quality, educating our future states that, "All learners should be facilitated in the attainment of the highest standards of learning through teaching of excellent quality. Quality in this context was brought about by maximizing the efforts of all those responsible for the education of learners and by coordinating all the structures of the system so that centers of education, from pre-school to university, are places where effective teaching, learning and research take place and where the highest standards of achievement, in accordance with ability, are obtained by every student".

Drawing on Bunting (1993) who declares that, "Quality in education does have a bottom line and that line is defined by the goals and values which underpin the essentially human activity of education". The clear implication was that this bottom line must be the starting point for the understanding of the notion of quality in education so that one does not reify the practice of education and reduce education to a technical activity that is static and unaffected by contextual and contingent circumstances. More so, The United Nations Sustainable Development Goal (SDG) number four seeks an equitable, quality and widespread education that enables an outcome of sustainable development by 2030, hence the reason for undertaking the study. Intersecting the studies of society and earth processes, a geographical education is well placed to make cohesive sense of all the individual knowledge that contributes to achieving life skills.

2.2.1. Understanding the relevance of geography topics

Geography is one of the optional subjects being offered in Zambian schools. Geography is said to be the study of places and the relationships between people and their environments (National

Geographic, 2020). The study of geography imparts knowledge and skills related to the local environment of the learners themselves. It helps learners or students to make sense of their surroundings and connect to the wide variety of natural resources. Geography is all about connections of humans with spaces and places. They understand the natural and human processes and patterns present in these environments, and they can learn to appreciate the similarities and differences between places. It also provides opportunities to acquire a range of investigative, graphical, and other skills.

Thus, geography encourages students to promote understanding of, and respect for, the cultures and ways of life of peoples throughout the world. It nurtures an informed sense of individual and community responsibility for environmental care (Graves, 1996; Andrew, 1996; GoI, 1999). It allows Geographers to explore both the physical properties of Earth's surface and the human societies spread across it. Geography is a vibrant subject in content and methodology as it responds to perpetual environmental modifications. It is considered both as a science and humanity as it transcends boundaries to describe the earth and its diverse components and also interconnects with all the other disciplines (Dorn, 1991). The study of geography is very important as it involves a process of discovery and enables the learner to acquire knowledge and develop positive attitudes and skills of inquiry, critical thinking and decision making. Geography has been fashioned to help learners cope with the demands and challenges of modern world and also the realization that the world has evolved into a global village.

Geography curriculum is aimed at creating a kind of learner that can identify and solve problems in the society, while making decisions using critical and creative thinking. Topics that are relevant to today’s needs such as climate change, water availability, natural resources and more are important to be understood. In order to be able to work effectively as an individual to collect, analyze and interpret information, and sustain a commitment towards sustainable society there is need to have a back ground of geography (Uitto & Solaranta, 2016).

It was evidence that geography is a multidisciplinary subject that develops pupils who can analyze and understand the world around them; these results in ability and willingness to take positive action, both locally and globally, as geographers are the agents of change. Hence, learners in

schools should be taught skills on how to conserve the environment, how to cope with climate change through geography topics and environmental awareness campaigns. Hence one may question if learners are practicing what they are taught at school or if at all they are using the skills acquired in society. Geography education is an important tool that is applied in the contemporary world, to succeed, as it mitigates the challenges which are faced in life and plays a pivotal role in developing individuals based on their everyday experiences (Uitto & Solaranta, 2016).

2.3. Relevance of geography topics to societal needs globally.

Yli-Panula, Jeronen & Lemmetty (2020) Conducted a study in Finland which focused on teaching and learning methods in Geography, topics, goals and level of thinking skills. The findings of the study were that the feature of the teaching methods used in geography education included outdoor education to achieve the sustainable development goals (SDGs). But the most emphasized features were active participation, thinking skills, animation, evaluation, dialog, demonstration and information and communication technology skills.

This study is very informative to the current study as it covers teaching and learning methods that can be used to teach certain topics that can make it easy for learners to acquire the relevant skills needed to sustain themselves and answer to issues affecting society. It made the researcher realize that teaching and learning methods are part and parcel of the relevance of geography topics to societal needs, though it differs with current study in methods and focus. Yli-Pamula et al. used a mixed method approach and focused on skill provided by teaching and learning methods while the current study will focus on relevance of geography topics to society.

Another study conducted in Germany by Hemmer & Hemmer (2017) a cross- section study on teachers' interest in geography topics and regions: How they differ from students' interests? In this study, 141 teachers at secondary school completed questionnaires about their interest in geography topics and regions. The findings were that, teachers showed high interest in a broad range of geography topics. They were very interested in natural disasters and topographic topics whereas there is only little interest in several traditional topics from the field of human geography. The significantly higher interests of teachers only partially correspond to those of students (e.g. natural disasters). The study showed that teachers and students were just interested in topics that

were relevant to them especially those topics which had to do with Physical Geography than Human geography.

The study was relevant to the current study as it had informed the current study that there are topics in geography which teachers and students have interest in than others, which is the reason why some topics cannot be fully taught to impart the relevant skills needed in society. The study also employed a quantitative approach and used questionnaires in a single survey of students and teachers using factor analysis and T-tests.

2.4. Relevance of geography topics to societal needs continentally

Okrah, Ampadu & Yeboah (2019) also conducted a study in Ghana on the relevance of the senior high school curriculum in Ghana in relation to contextual reality of the world of work. The purpose of the study was to identify the skills embedded in the curriculum, the skills that learners had acquired and those that employers usually demand of employees by relating them to empirical findings of the skills employers in general demand of employees. A conceptual content analysis was used to determine the skills embedded in the curriculum. Purposive sampling procedure was used to select twenty-one students and fourteen key informants for an interview.

However, the findings were that that the senior high school curriculum, though was generally rated as relevant, the skills with the highest frequencies in the curriculum focused on attitudes and values while those required by employers focused on the application of knowledge. On the basis of these findings, it was concluded that the curriculum was relevant in instilling values into the students but it is not relevant in the application of knowledge that employers usually demand of employees at the work environment. The study is related to the current study in the sense that it looked at the relevance of the senior high school curriculum though it covered seven subjects that included geography.

The current study was forecast on Geography topics and the relevance of skills embedded in it to address societal needs. The study also differs from the current study in terms of respondents and informants as it focused of the grade 12 learners and the employees in various industry, the current study will focus on school leavers, teachers and community members to get the view points as they are the center of influence.

A more recent study conducted by Besele & Molatseli (2022) in Lesotho on assessing the relevance of Geography in addressing Technological skills: a case of Lesotho. The paper aimed at investigating whether Lesotho Geography syllabus addresses technological challenges. The study employed document analysis, analysis of grade 10 geography syllabus and interpreting other authors' findings so as to present how geography is relevant in addressing technological skills. The findings were that technological skills are not explicitly integrated in geography education. Thus, it was recommended that geography should be taught with more emphasis on equipping learners with explicit skills on GIS, GPS, Remote sensing as such skills is essential in the world of work.

The study is informative to the current study as it looked at the skills that geography is able to offer if well integrated in geography education, it focused on technological skills which are very important in today's societies. The current study focused on a holistic skill acquisition from senior geography topics and how geography topics can answer to current challenges and needs that society is facing be it, thinking skill, technological skills and basic manual skills.

2.5. Relevance of geography topics to societal needs nationally

Locally, a study conducted by Mundende (2007) on implementation of geography field project in Zambian high schools. This study was conduct soon after the field project topic was included in the senior secondary school geography topics. The study investigated views, beliefs, attitudes, feelings and challenges experienced by pupils who were learning the topic was concerned and how teachers who taught the new component found it to be. The findings were that geography teachers faced challenges in implementing the newly introduced topic because they were not trained to offer it but did not address the relevance of the topic to societal needs.

Mundende's study was very informative to the current study as it highlighted how inclusion of field project would make geography more practical than theoretical text-book based. However, the study did not go further to look at other topics that were included or omitted in the senior secondary school geography. It could not also evaluate the relevance of the topic to social environmental needs and the benefits of the topic to learners' lifelong skill acquisition. The other gap identified was that, the study was concentrated on the southern part of the country, Livingstone and Monze whereas the current study was conducted in the northern part of the country in Kasama district in particular.

In the same vein, the study done by Nakazwe (2011) evaluated the effectiveness of degree holder geography teachers trained in field project in high schools of Lusaka and Kafue districts. The study investigated views, beliefs and challenges experienced by trained geography degree holder teachers and the untrained teachers in field project diploma holders and grade 12 pupils taking geography. The findings of the study were that teachers trained in the filed project did not take the pupils for field research or field experience due to lack of funds and administrative challenges in funding field projects.

The study was relevant to the current study as it brought out what contributed to lack of skill acquisition by learners. However, the study did not consider the relevance of field project topic to societal needs and learners' skill acquisition especially after several years of implementation of the topic. It rather concentrated on views, beliefs and challenges faced by teachers and learners on the implementation and learning of the topic.

2.6. Inclusion of contemporary issues to Geography curriculum

Geography education is an important tool that is applied in the contemporary world, to succeed, because it mitigates the challenges which are faced in life and plays a pivotal role in developing individuals based on their everyday experiences (Uitto & Solaranta, 2016). The geography curriculum can promote learning across the curriculum in numerous areas such as spiritual, moral, social and cultural development, and in key skills, and thinking skills. The aim of the geography curriculum is to create the type of learner that can identify and solve problems existing in societal landscapes. That is why it was important that contemporary issues are included in the senior secondary school geography curriculum.

2.7. Inclusion of contemporary issues to Zambian Geography curriculum

In a study conducted in Lusaka province by Muchanga (2011) on Perceptions of climate change adaptation and learning among residents of selected areas of Zambia's Lusaka Province. The study employed a mixed methods approach, were cluster and simple random sampling techniques were used and data collected using semi-structured interview schedule, simple unstructured observations and photographing. The findings were that residents or respondents perceived the

causes of climate change from diverse angles ranging from socio-economical, ecological, political, moral, spiritual as well as cultural and technological contexts.

The main recommendation of the study focused on an urgent need to find out what the contents and methods of all such suggested types of education for climate change adaptation and mitigation learning might be. The researcher, however, over looked the idea that people lacked knowledge of climate change either because it was not taught to them in school or they did not learn it geography. Therefore, inclusion of climate change in geography curriculum would help understand and mitigate some challenges faced by such residents in different communities of Zambia. If at all the selected households had geographical knowledge on climate change, they would understand ways of reducing the effects of climate change and that could only be possible if the topic would be included in the geography curriculum, as there were so many areas that would need to cover climate change.

A study conducted by Habowa (2007) on evaluation of the implementation of the new Zambian high school geography in rural high schools of Mkushi district and Phiri (2011) on the relevance of education for sustainable development to Zambia high school geography. Both did not focus on the relevance of the topics contained in the new curriculum. The researcher made mention that education for sustainable development was yet to be included in the high school geography topics though a decade has passed and nothing has been done. The study aimed at ascertaining the relevance of education for sustainable development (ESD) to Zambian high school geography.

The study sought to determine the aspect of geography that is compatible with ESD to ascertain the attitude of high school geography pupils towards geography and determine ways to empower them so as to make them thrive in their local environment. The findings of the study were that geography was appropriate for ESD incorporation because of its unique ability to amalgamate aspects of social sciences and natural sciences. Other findings were that pupils had negative attitudes towards geography because of its detachment from the pupils' personal environment and excessive use of teacher-centered teaching methods and the bulky nature of the syllabus.

The study was important to the current study as it discussed the incorporation of ESD in the geography syllabus as one of the topics relevant to learners and the environment in which learners exist. The study employed a mixed method approach and surveyed city high schools while the current study used a qualitative method approach and surveyed schools from Kasama District.

Another study was conducted by Mubita (2011) on Perceptions of environmental hazards and disasters in geography among selected diploma colleges of Zambia. The study used a descriptive survey research design and a purposive sampling technique to examine lecturers and students' perception on environmental hazards and disasters the findings were that lecturers and students seemed not to take what was taught and learnt concerning environmental hazards and disaster into consideration in terms of their worthiness and appropriateness of the topic.

Other findings were that certain approaches and methods were preferred by respondents in teaching and learning of environmental hazards in colleges offering geography such as field work, discussion, simulation and drill. The study was informative to the current study as it discusses one of the contemporary issues in geography though it is taught partly as the disaster part is not covered in the syllabus. Though the study indicated that use of methods aforementioned would bridge the gap between geography and society, conversely, it did not take into consideration the relevance of the topic environmental hazards and disaster to societal needs. The only confined its focus on colleges of education and not senior secondary schools.

Mulemi (2011) conducted a study on the effects of the new Zambian high school geography curriculum on learners. The study looked at the positive and negative effects of the curriculum on the learner and improvements to be made to the new geography curriculum. The study sought to investigate views of policy makers and parents about the geography curriculum, views of teachers and learners of geography. The study was significant to the current study as it looked at the effects of the new high school geography curriculum on learners, as the learner is the center of all activities that takes place in the learning environment.

However, the study did not evaluate the relevance of the geography curriculum to learners and the society as a whole. It also created a gap by not analyzing the curriculum to ascertain its contents

(inclusions and omissions) made to the "new Zambian high school geography curriculum" (2013) but the negative effects just concentrated on the lack of materials overlooking the relevance of it.

In order for Geography to stay relevant in secondary education, much of its contributions should be shared by the principals and curriculum decision-makers because the value and future of this subject is in their hands. Though studies on the relevance of senior secondary geography topics in addressing societal needs shows insufficient research, there has been more comparative debate on the role that geography plays to societal wellbeing and development.

Table 1: Summary of some reviewed Literature

Author	**Theme**	**Knowledge gap**	**Principle gap**
Okrah, Ampadu & Yeboah (2019), Senge (2018) Hemmer & Hemmer (2017)	relevance of the senior high school geography curriculum to societal needs.	The studies concentrated on knowledge demanded by work environment the current focuses on lifelong skill acquisition to solve societal issues.	The studies did not consider the mismatch between school and reality, Relevance of geography in addressing societal needs, bulkiness of geography content and detachment of geography topics from learners' personal environment.
Besele & Molatseli (2022), Mubita (2011), Mundende (2007),	relevance of senior secondary school geography topics in addressing social environmental needs	Emphasized equipping learners with GIS, GPS, RS, environmental hazards & disasters as well as research skills. Studies did not consider needs of society	

Uitto & Solaranta, (2016) Phiri (2011), Muchanga (2011). Habowa (2007)	Inclusion of contemporary issues in geography curriculum	The studies did not analyze the contents of the syllabus if it contextually fit with current environmental issues. The study concentrated on the implementation of geography	

2.8. The research Gap Addressed and Directions' from Literature Review

The Literature discussed in this chapter stressed the relevance of geography in addressing societal needs, bulkiness of geography content and detachment of geography topics from learners' personal environment which needs to be addressed.

2.9. Chapter Summary

This chapter reviewed literature related to the study. It started by explaining the relevance and quality of geography according to ministry of education explanation standard. It further took into consideration the relevance of senior secondary geography topics to societal needs globally, regionally and nationally. Covered under this chapter were inclusions and omissions of geography topics that might be relevant to societal needs and learner skill acquisition on global, regional and national scale. A summary of related reviewed literature concludes the chapter.

CHAPTER THREE: DESCRIPTION OF THE STUDY AREA

3.1. Overview

This chapter gave a description of the study area. The section took into consideration the physical characteristics of the study area with the aid of a physical characteristic map. Besides that, the researcher considered the demography, socioeconomic activities, of the study area.

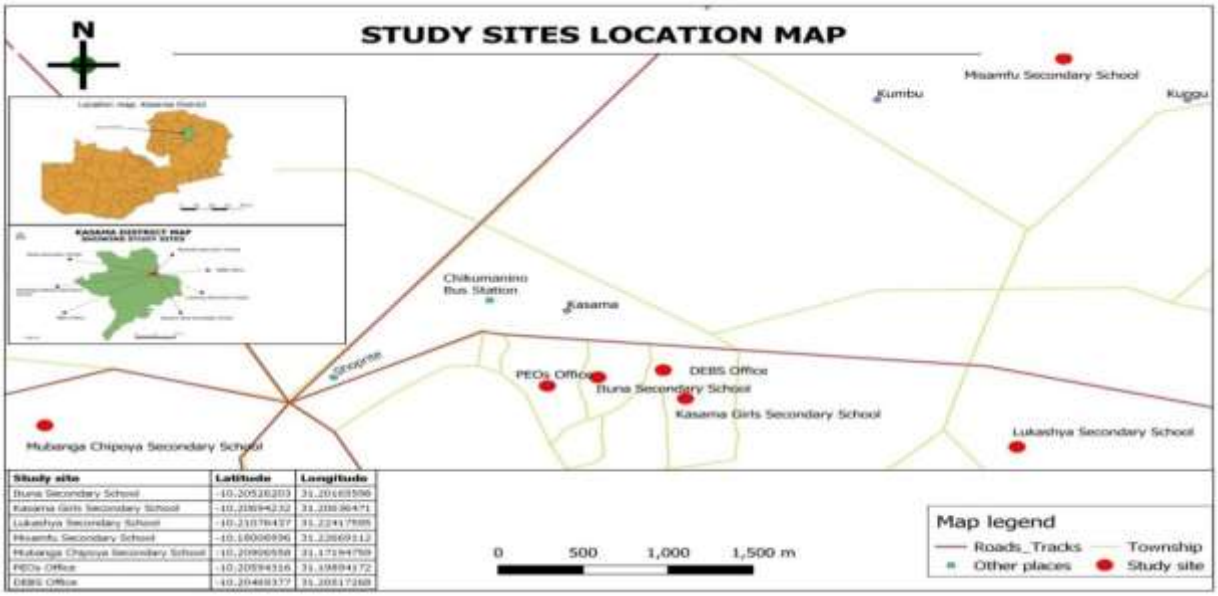
3.2. Physical characteristics of the study area

3.2.1. Location of the study area

Kasama District is located in the northeastern part of the country and lies between Latitude; 10°12' 46.40"S and Longitude**:** 31° 10' 51.02" E (URT; 2007). It is about 852 km from Lusaka the capital city of Zambia with an area of about 10,788 km^2. The District lies on longitude 30 degrees and 32 degrees east and latitude degrees 9 and 11 degrees south and at an average altitude of 1300m above sea level. The district shares boundaries with Senga district in the north, Mungwi district in the north-east, Chinsali district in the south-east, Chilubi district in the extreme south-west, Kanchibiya district in the south, Lunte district in the south-west and Mporokoso district in the north-west.

The District is located about 200km from the Port of Mpulungu on the shores of Lake Tanganyika, the second deepest fresh water lake in the world which is shared by several great lakes region countries such as Tanzania, Democratic Republic of Congo and Burundi. It is also linked to the Port of Dare-es-salaam on the shores of the Indian Ocean by both rail and road and the Democratic Republic of Congo and the commercial hub of Zambia, the Copperbelt province through Luapula province via Luwingu-Mansa-Pedicle Road. The district is also linked to the capital city of Zambia by air, rail and road. In addition, Kasama airport is been expanded to start handling big commercial air crafts and 40% of the works has already been done.

Figure 2.



Source: **Q-GIS, GPS and Global Mapper, (2024).**

The study location map was important to the study in that it showed the location of schools where data was collected from which included both urban and rural schools in the outskirts of Kasama town that offered geography. Both urban and rural schools were sampled to minimize generalization of data. The map provided context and was included to help readers understand the study's geographic setting and was a visual aid that would help readers quickly grasp the location and spatial relationships between the study sites, making it easier to understand the research. Further, the map was included in order to reduce confusion about the study's location and help the readers better comprehend the research findings. Besides that, it showed the relevance of the study's location to the research questions and illustrates the study's sampling strategy, data collection sites and showed the distribution of results to help identify patterns or trends. More so, the map demonstrated the representative of the study sample and its potential for generalization to other areas and it was presented to enhance understanding and interpretation of the research findings.

3.2.2. Climate

The climate of Kasama district is characterized by hot wet summers and cool dry winters and mostly clear and warm year-round (Zambia Metrological records, 2012). Over the course of the

year, the temperature typically varies from 18°c to 24°c and is rarely below 44°F or above 95°F. The hot season lasts for 1.8 months, from September 19 to November 13, with an average daily high temperature above 88°F. The hottest month of the year in Kasama is October, with an average high of 24°C and low of 18°C. The cool season lasts for 7.2 months, from December 24 to July 31, with an average daily high temperature below 78°F. The coldest month of the year in Kasama is July, with an average low of 48°F and high of 76°F.

The rainy period of the year lasts for 6.6 months, from October 15 to May 4, with a sliding 31-day rainfall of at least 0.5 inches. The month which records the highest rainfall in Kasama is January, with an average rainfall of 8.3 inches. The rainless period of the year lasts for 5.4 months, from May 4 to October. A wet day is one with at least 0.04 inches of liquid or liquid-equivalent precipitation. The rainfall varies very significantly throughout the year. The wetter season lasts 4.8 months, from November 17 to April 10, with a greater than 40% chance of a given day being a wet day. The drier season lasts 7.2 months, from April 10 to November 17. The month with the fewest wet days in Kasama is July, with an average of 0.0 days with at least 0.04 inches of precipitation (Kasama Meteorological Records, 2016).

3.2.3. Edaphic Characteristics

According to Chidumayo (2016) the district is characterized by high flat and gently undulating plains covered with low and sparse vegetation. He further explained that, soils in the district are described differently based on variation of relief features such as that on hilltops, soils are moderately well drained by whitish or pinkish quartzite and inter blended light purplish shale. On the low-lying bottom lands, soils are moderately deep well drained by poorly drained black cotton soil (cambisols and vertsols) which covers an extensive area of land about 70% of all the soil types in the district. Typical occurrences can be observed at Chishimba Falls (Trapnell & clothier, 1996).

The Kasama Formation shows generally gentle dipping. The quartzite shows a massive texture and consists mainly of fine to medium size (max 3mm) quartz grains (Trapnell& clothier, 1983). It is characterized by a well-sorted texture of sugary quartz crystals. The topography within 2 miles of Kasama contains only modest variations in elevation, with a maximum elevation change of 413 feet and an average elevation above sea level of 4,495 feet. Within 10 miles contains only modest

variations in elevation (771 feet). Within 50 miles contains significant variations in elevation (1,860 feet) (Kalima, 1983).

31.3. Statement of the problem

.2.4 Vegetation

The dominant vegetation in the study area consists of three types namely; Miombo (Brachystegia/Julbernardia) woodlands. The Chipya vegetation type or Chipya woodland (Marquesia/ Brachystegia) woodland and Mushitu (evergreen thicket) (Trapnell, 1983). Species such as mopane, Zambian teak (kayimbi), the Mubanga, Mupapa are other tree species found in the district, (Lawson, 1978). The area within 2 miles of Kasama is covered by cropland (59%) and grassland (40%), within 10 miles by cropland (52%) and trees (25%), and within 50 miles by trees (73%) and shrubs (18%) (Chidumayo,1987).

3.3. Socioeconomic background

3.3.1. Demography

According the 2010 National Census of population and housing, human population in Kasama district increased from 170,929 in 2000 to 231,824 Population in 2010, comprising of 114,208 males and 117,616 females, the percentage distribution is 49.3 percent for males and 50.7 percent for females respectively and it was averaged at 22.04/km² Population density, (Census;2010). The population annual growth rate for the district has been estimated at 3.1 %.

3.3.2. Social economic activities

The major economic activities by the residents in the study site are mostly agriculture. The district has a farmer population of 91,525 farmers with major production being in agro crops such as maize, cassava, soya beans, finger millet and groundnuts are grown among other crops, as well as livestock such as goats, pig and sheep are kept by a number of farmers. About 90 % of the population lives in peri-urban depending on small businesses as marketers, shop owners and businesses of different kinds. Kasama has three major private agriculture companies namely Northern Coffee Corporation Limited (NCCL) operating Kateshi Estates with approximately 2, 466 hectares of land and NCCL is the subsidiary of Olam International Limited; Kalungwishi Estates Limited and Miracle fisheries which is operated by Kalungwishi Estates.

Olam specializes in the production of coffee; however, they have diversified into banana production as well as cashew nut production. The company employs in excess of 600 permanent employees and 2500 employees at pick periods. Kalungwishi Estates Limited the producers of Kasama sugar brand is located about 30 kilometers north from Kasama Central Business District (CBD). The company produces between 2500 to 2600 metric tons of sugar every year and it has been operational since 1987. Miracle Fisheries Company is located about 40km from the CBD of Kasama town. It has 18 ponds at its Chilubula farm and it produces about 1, 200 metric tons of fish annually.

3.3.3. Chapter Summary

This chapter presented the study area site map and explications of the physical, demographic, climatic, edaphic and vegetation characteristics of the study area and the study area map showing location of study sites, climatic, edaphic and vegetation characteristics of the study area. It covered all activities that were related to the study which mighty help understand how learners of geography devise means of survival in accordance with the knowledge and skills acquired from senior secondary geography topics. The subsequent chapter reviewed literature related to the study so that the problem under study could be more understood.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1. Overview

All research is grounded on some causal philosophical expectations around what creates "valid" research and which research technique is appropriate for the development of knowledge in a given study. This chapter covers methods that were employed in the study focusing on the research paradigm and designs, ontological and epistemological assumptions, critical reflexivity, practical implications, research approach, research design, target population, sample size, sampling procedures, data collection and analysis techniques.

4.2. Research Philosophy

This study was informed by critical realism philosophy which is of the opinion that there was not a single reality or truth about the social world, but rather a set of realities or truths which are historical, local, specific and non-generalizable (Bertram & Christiansen, 2016, p. 26). Critical realism philosophy was used because it can offer valuable insights into the study about the relevance of senior secondary school geography topics in addressing societal needs by providing a framework that encourages a deeper examination of the relationship between knowledge, reality, and societal context. Along those lines, this study made meaning out of human experiences, perspectives, and feelings on the relevance of geography topics to societal needs in Kasama district, Zambia. The realities of people differ that is why this study evaluated the realities of each participant to understand the relevance of geography topics to modern societal needs in Kasama, district.

4.2.1. Research paradigm

A paradigm is an assumption that a researcher makes about reality and how knowledge is obtained and methods of obtaining knowledge (Creswell and Plano Clark,2011:21). The interpretive world view guided the study. A qualitative method

Creswell and Plano Clark (2011:21) define paradigm as "assumptions a researcher makes about reality, how knowledge is obtained and the methods of gaining knowledge." (Morgan, 2007: Creswell, 2014). Different human beings view things differently. Therefore, different views of participants regarding relevance of senior secondary school in addressing modern needs of society

were sought to avoid oversimplification of reality. The study relied on multiple perspectives of participants to better understand the effectiveness of senior secondary school geography topics in addressing the needs of society.

4.2.2. Ontological Assumption

Critical realism emphasizes the existence of underlying structures and mechanisms that shape observable phenomena. In the context of studying the relevance of geography topics, this means acknowledging the underlying social, economic, and environmental realities that influence societal needs. The ontological assumption was that reality is not "out there", but somewhat existed in the human mind, and was provisional on human experiences and interpretation (Crotty: 2003, p10). Realities were developed from the data participants provided according to their experiences with geography topics and skill acquisition. It acknowledges the existence of an objective reality independent of perceptions.

4.2.3. Epistemology Assumption

Critical realism advocates for the acceptance of multiple ways of knowing and understanding the world. By studying the relevance of geography topics, this meant recognizing the varied knowledge structures and perspectives that could contribute to addressing societal needs. Epistemologically, the data obtained and discussed in this study was subjective in nature because it was socially constructed based on how key informants, teachers, learners and stakeholders that were interacted with on the evaluation of the relevance of senior secondary geography topics in addressing societal needs processed and interpreted it. Even more importantly, Bertram and Christiansen (2016) state that researchers in the critical realism paradigm do not aim to predict what people will do, but rather describe and understand how people make meaning out of their social world and how they consider their own conduct.

This study was guided by critical realism where the researcher used subjective realities as interpreted by the interaction between the researcher and research participants to understand the social environmental needs of society. Society is subjective in nature, it is experienced and structured as one behaves and gives meaning upon it, in this case the relevance of geography topics to modern societal needs was evaluated in accordance with the behavior and experience of members of the society. Meaning therefore, was constructed and constantly re-constructed through

experience resulting in differing interpretations of participants as they act in multiple ways (DeLyser &Sui, 2013).

4.2.4. Critical Reflexivity

In Critical realism researchers are encouraged to reflect critically on their own assumptions, values and biases. Studying the relevance of senior secondary school geography topics, included cross-examining the underlying ideologies and dynamic forces that shaped the construction of knowledge in the field of geography. The researcher critically examined how certain topics in senior secondary school geography might be marginalized or privileged within the curriculum and how societal inequalities are mirrored extensively.

4.2.5. Axiological Orientation

This study's axiological orientation which refers to the value-based perspective or philosophical stance guiding it, was based on critical realism which emphasizes on the critical examination of power relationships, social justice and the role of social justice in shaping societal values. The study's axiological orientation was by understanding role of geography in addressing societal challenges which focuses on practical problem solving, effectiveness and its relevance in addressing real world challenges. By applying critical realism, it may uncover underlying power of social justice in geography education and challenge dominant discourses and promote alternatives perspectives.

4.2.6. Practical Implications

Critical realism emphasized on the practical implications of theoretical insights for addressing real-world problems. By studying the relevance of senior secondary school geography topics, meant considering how theoretical underpinnings of geographical concepts could be useful in addressing particular societal needs, such as environmental sustainability, climate change action and anthropogenic undertakings. The researcher explored the potential impacts of integrating certain topics or perspectives into the curriculum to better meet these needs of society.

4.3. Research Approach

This study employed qualitative research approach to explore the complexities of senior secondary school geography topics in addressing contemporary societal challenges. A qualitative research

approach explores phenomena through in-depth, non-numerical data collection and analysis. Geography education relationship with societal challenges is complex and nuanced, requiring in-depth exploration. Qualitative research approach considers the context in which geography education occurs and it also prioritizes participants' perspectives and experiences. The approach allows for identification of emerging themes and patterns and it adapts to changing research contexts. Quantitative research methods were not used because they might oversimplify complex relationships between geography topics and societal challenges and mighty neglect contextual factors.

Besides that, mixed methods were not used as well because the study's research questions focused on exploration and description, making qualitative methods more suitable. Integrating qualitative and quantitative methods can introduce methodological complexity, potentially diluting the study's focus. Mixed methods mighty also lead to overemphasis on quantitative findings, undermining the qualitative insights of the study.

4. 4. Research design

The study adopts a qualitative research approach to explore the complex relationships between senior secondary school geography topics and contemporary societal needs. Research design referred to the overall approach that one selects to attack the challenges which requires integration of different components of the study in a coherent and logical way, thereby, warranting to solve a problem in an efficient manner (Grower, 2015:1). Kombo and Tromp (2006:70) defines a research design as 'the ''glue'' that grips all the elements in a research project together [and] is used to structure the study to show how all of the major parts of the research project work together try to address the central research questions'. The study employed a qualitative descriptive study design.

An evaluative case study design was chosen so as to get in-depth data, different views, beliefs, attitudes and perception of participants regarding the relevance of senior secondary school geography topics in addressing contemporary societal needs in Kasama district. It allowed for an in-depth examination of the context, processes and outcomes of senior secondary school geography education, providing a nuanced understanding of how it addresses contemporary societal needs. By focusing on a specific case, the study provided insights into the practical challenges and opportunities faced by educators, policy makers and other stake holders implementing geography education. An evaluative case study provided an actionable insight by

examining a specific case, the study could identify practical implementations for improving geography topics making them more relevant and effective in addressing contemporary societal needs.

According to Hancock and Algozzine (2006), an evaluative case study research design allows researchers to detect multiple truths that are not easily quantifiable than other case studies. Yin (2014) also defined a case study as an empirical inquiry that examines a current phenomenon within its real-life context, especially when the limits between phenomenon and settings are clearly defined. This design also allowed the researcher to collect detailed data using a variety of data collection instruments and procedures (Yin, 2014). In this study the researcher used unstructured observations, unstructured interviews and focus group discussions as data collection methods which are in line with the evaluative case study research design.

The evaluative case study was chosen in order to give the researcher some in-depth examination of the context, participant experiences and emerging themes. An evaluative case study focused on evaluating the effectiveness of senior secondary school geography topics in addressing contemporary societal needs and approach allowed for an in-depth examination of topics outcomes, impact and lessons learned providing valuable insights for educators, policy makers and administrators. It also to probed further and get a deeper understanding of the phenomenon under study from participants (Creswell, 2014).

This method differs from those of other methods in its holistic approach to data collection in natural settings and its use of purposive sampling procedures. By prioritizing participant voice and contextualization, this study provides a nuanced understanding of senior secondary school geography topics' role in addressing contemporary societal challenges.

4.5. Target population

Target population referred to all the members who meet the particular criterion specified for a research investigation" (Alvin, 2016:10). In this study the population consisted of all teachers currently teaching geography from Kasama urban and rural secondary schools that offer geography, all learners taking geography as a course of study from the sampled schools, Heads of Social Sciences Department who are geography oriented and Key informants who included lecturers from Kasama college of Education offering geography, one official from Curriculum

Development Centre (CDC) and one official from Examination Council of Zambia. Senior secondary school geography teachers and geography lecturers from college of education were targeted because they are the implementers of geography topics and learners are the recipients of the contents of geography topics. The curriculum development official specialized in geography was targeted because they are at the center of curriculum design and development.

4.5. 1. Study sample

According to Neumann (2014) sampling is selecting some cases to examine in detail and then use what is learnt from them to understand a much larger set of cases. Therefore, this study had a sample size of 25 participants broken down as follows: ten teachers of which three were supposed to be Heads of Department for Social Sciences (HODs) who were geography orientated then seven were subject teachers currently teaching geography, ten students, three lecturers, one official from Examination Council of Zambia (ECZ) and one official from Curriculum Development Centre (CDC).

4.6 Sampling methods and procedure

The study employed a non-probability sampling which was qualitative research method. Unstructured interviews and focus group discussions, these methods allowed for an in-depth exploration of teachers' and students' perspectives and critiques. This study employed homogeneous purposive sampling technique and expert purposive sampling to select participants, because these were the appropriate methods for this study because these techniques helped the research to select participants with similar characteristics. The researcher used homogeneous purposive sampling which is a non-random sampling method to select participants from a specific group or population that share similar characteristics or traits (kalu,2019) in this case those that were geography orientated. The study aimed to explore specific perspectives of students which required a focused sample with shared characteristics. The selection criteria used was students enrolled in geography classes aged between 15 and 20 years old with mixed academic achievement (average, above average and below average) and students willing to share their experiences and opinions.

Expert purposive sampling was used as an appropriate method to select unique cases that were informative as it uses the judgement of an expert in selecting cases with specific purpose in mind

(Kothari, 2004; Neumann, 2014). In this study, teachers and lecturers who currently taught geography as well as students from geography classes were selected. The researcher then contacted and approached the selected participants to invite them to participate in the study and clearly explained the research objectives, the reasons for their selection, and informed consent from participants were obtained.

Expert purposive sampling involved selecting participants who were considered experts or highly knowledgeable in the field of study or subject, in this case geography education. This sampling method was used because the research aimed to gain insights from individuals with specific expertise. According to (Kalu,2019) "Expert purposive sampling" refer to a sampling method where researchers deliberately select individuals with expertise or specialized knowledge in a particular area to gather data that is specifically relevant to their research objectives. To gather insights, expert purposive sampling was used to select participants with specialized knowledge and experience. This approach ensured that the insights collected were from individuals with a deep understanding of the subject matter, which could be beneficial in certain research contexts.

Therefore, in this study lecturers and geography specialists from Examination Council of Zambia and Curriculum Development Center respectively, were purposively selected as experts using professional networks. These individuals were chosen because they provided unique insights, experiences and had in-depth understanding of the research topic. The selection criteria for teachers was minimum of two years teaching geography at senior secondary level. Lecturers were selected basing on academic qualification which was lecturers with degrees in geography or related field, currently teaching geography at a senior secondary school, college or university and lecturers willing to share their experiences and expertise.

Homogeneous purposive sampling ensured that students with similar characteristics were selected, allowing for in-depth exploration of their perspectives. Expert purposive sampling ensured that teachers, lecturers and geography experts with specialized knowledge and experience were selected, providing valuable insights. These were valuable methods in this study as the goal was to gain in-depth insights from specific groups or knowledgeable individuals to ensure data quality. Purposive sampling does not require large sample sizes. It was essential to ensure that the chosen participants were a representative of the homogeneous group that is why only 24 participants were selected.

4.7. Data collection methods and instruments

The researcher used both primary and secondary data collection methods which aimed at gathering insights from geography teachers, lecturers and students and also to contextualize findings within existing literature and policies.

4.7.1. Primary Data Collection Methods

Primary data collection methods are methods used by the researcher to collect original data directly from participants. Data was collected using semi-structured interviews with ten geography teachers and three lecturers. and geography experts from CDC and ECZ on the evaluation of senior secondary geography topics in addressing societal needs of Kasama District. This allowed spontaneous and open-ended conversations to encourage participants to share detailed and personal experiences. Apart from that it enabled exploration of unforeseen topics and themes and facilitated a more natural as well as conversational tone. Besides that, the researcher ensured that the questions were clear, concise, and evaded leading or biased language.

There were however, challenges that were encountered and resolved by establishing clear goals and topics to guide the conversation. The interviewer ensured neutrality and focus was maintained.

Before conducting the actual interviews, the researcher conducted a pilot test of the interview guide with a small sample of teachers and learners from different schools that were not part the sampled school. The pilot test helped identify ambiguities in the research questions and ensured that the guide effectively captured the necessary data. It was discovered that some questions in the guide were a repetition of the preceded questions and therefore, the interview guide was refined and adjusted the approach. The researcher scheduled interviews with teachers, lecturers, and curriculum development official and examination council of Zambia official in charge of geography and conducted the interviews in person. To collect data from participants and Key informants unstructured interview method of collecting data were used. This data collection instrument involved presentation of oral-verbal stimuli and reply in terms of oral-verbal responses (Kothari, 2004).

The researcher also conducted a focus group discussion with 10 students to explore the experiences and perspectives on teaching geography the participants were chosen based on the learning experience and geography as a course of study.

A phone and notebook and pen were used for recording discussions from interviews with teachers and lecturers and focus group discussions between students. This was done to aid data analysis and reduce bias.

4.7.2. Secondary Data Collection Methods

Secondary data is existing data collected by others, analyzed and interpreted by the researcher. Secondary data were obtained by reading different academic papers and books, websites and search engines such as science direct, Eric, Amazon and Google scholar as tabulated in the literature review.

Analysis of senior secondary school geography curriculum guide grade 10 to 12 and review of existing research on geography topics. By using a combination of primary and secondary data collection methods, the study aimed to gather original insights from teachers, lecturers and students and contextualized findings within existing literature.

4.7.3 Data analysis and procedure

To address the research questions and objectives, a comprehensive data analysis was conducted. The analysis aimed to identify patterns, themes and relationships within the data by providing a rich understanding of the phenomena under study. Given the qualitative nature of the study thematic analysis and document analysis were employed to analyze data. These approaches were chosen for its ability to capture the nuances of participant experiences. Qualitative data is often subjective, rich, and consists of in-depth information normally presented in the form of words. As a result, analyzing qualitative data entails reading a large number of transcripts looking for similarities or differences, and subsequently finding themes and developing categories.

The researcher used inductive thematic data analysis techniques to identify common themes, patterns, and key findings related to the evaluation of the relevance of senior secondary school geography topics in addressing societal needs in Kasama District. Inductive thematic analysis is a qualitative research methodology that involves identifying, coding and categorizing pattern and themes within data, without preconceived notions or hypothesis (Braun & Clake, 2006). It is a data driven approach where themes emerge from the data itself, rather than being imposed by the researcher. This type of analysis was used because the researcher also transcribed and analyzed

the interview responses in a clean verbatim transcription meaning that stammers, stutter, pauses etc. were removed to make the presentation more meaningful.

Data analysis started during the collection implementation by arranging the field notes in line with the three research objectives. Dawson (2013) stated that, for qualitative data, the researcher may analyse as the research progresses, continually refining and reorganizing in light of the emerging results. As such, data from teachers' and Lecturers' interviews was analyzed using inductive thematic analysis as follows:

The researcher started by familiarization where reading and re-reading the data to understand the content and context. Then coding was done where assigning labels or codes to segments of data to capture meaningful moments. Identification of initial themes and patterns in the coded data was the next step then analyzing and interpreting the themes, considering the research question and objectives. After interpretation was done generating themes followed.

Transcribing the recorded focus group discussions and interviews in verbatim to ensure accurate and precise transcription of all the discussions. After which the researcher read and familiarized herself with the transcribed data to gain a comprehensive understanding of the participants' perspectives and responses. The researcher used thematic coding to identify and categorize key themes and topics discussed in the focus group discussions and interviews to assign appropriate codes to each theme or topic.

The researcher developed a coding framework and created a code book that outlines the definitions and descriptions of each code. This framework guided the analysis process and ensured consistency across the analysis. The researcher began coding the transcribed data by applying the codes from the coding framework to relevant sections of the text.

The researcher reviewed the coded sections and identified patterns or connections between different codes and then similar codes were grouped together and consolidated them into broader themes or sub-themes. This process was helpful in reduction of volumes of data and simplified the analysis. The researcher construed data by analyzing the themes and sub-themes, interpreting the implications and meanings behind them. This was achieved by taking into consideration the context, content, and frequency of the codes to gain insights into evaluating the relevance of senior secondary school geography topics in addressing to modern societal needs in Kasama District.

Triangulation was done by validating the findings and make sure that the reliability of the analysis by cross-checking the interpretations and conclusions with other researchers or experts in the field and also incorporate their feedback and suggestions into the final analysis. To conclude, the researcher summarized the findings, including the identified themes, sub-themes, and their implications for the relevance of senior secondary school geography topics in meeting contemporary societal needs in Kasama district and used quotes or excerpts from the focus group discussions and interviews to support the analysis. The conclusion was then drawn based on the analysis, highlighting the main findings and their significance and the implications for educational policy, curriculum development, or other relevant areas discussed. Additionally, the researcher identified limitations of the study and suggested areas for further research.

Table 2: Summary of Braun and Clark's Six Phase Framework for Thematic Analysis

Step 1: Become familiar with the data, Step 2: Generate initial codes, Step 3: Search for themes among codes	Step 4: Review themes, Step 5: Define themes, Step 6: Write-up.

Source: Maguire and Delahunt, 2017: 3354).

Inductive thematic analysis was used because it was suitable for exploration studies where little was known about geography topics relevant to societal needs. It allowed themes to emerge from the data itself, rather than being imposed by preconceived notions and could handle diverse data types and sizes. It also minimized the risk of forcing data into preconceived categories. Inductive thematic analysis allows for flexibility in coding, enabling you to identify patterns and themes that emerge from the data without being constrained by preexisting categories. Inductive thematic approach was used because it is a data driven approach, where the themes and patterns emerge from the data itself, rather than being imposed by the researcher.

By allowing data to guide the analysis, the approach helps to minimize research bias and ensures that the findings are grounded in the data. The process of inductive analysis was transparent allowing for auditing and verification of data and not only has it got rich insights, it also provided detailed contextualized insights into participants' experiences and perspectives and prioritized understanding the context and nuances of data. It is particularly well suited for qualitative data

such as interviews and focus group discussions. The transparent coding process and data driven approach of inductive thematic analysis makes it possible for other researchers to replicate the study and verify the findings.

4.7.4. Document Analysis

The researcher also used document analysis as earlier alluded to. Document analysis in research involves the systematic examination and interpretation of written, visual, or audio materials to extract relevant information and gain insights into the research topic (Morgan, 2022). This method is particularly useful when dealing with historical data, official records, policy documents, literature, newspaper articles, social media content, and various other forms of written or recorded material. The first step was to locate and collect the documents relevant to the research topic such as Senior Secondary Geography syllabus, Geography senior secondary school text books approved for use in schools and policy documents on education in Zambia. The researcher made sure to keep track of the source of each document for proper citation.

The researcher developed and created a coding scheme or set of categories that guided the analysis process. This scheme was aligned with the research objectives and help in organizing the information extracted from the documents. It can be a predefined set of categories or an open-coding approach where new categories emerge during analysis (Morgan, 2022).

The researcher read through the documents to become familiar with their content and context. Then took notes, highlighted relevant passages, and made initial observations. Applying the coding scheme to the documents involves categorizing the information found in the documents according to the predefined categories. This was done manually by coding. Once all the documents were coded, data was analyzed within each category, by looking for patterns, themes, trends, and relationships within the documents. In order to strengthen the validity of the findings, the results of document analysis were combined with data from other research methods (e.g., interviews) to validate and corroborate the interpretations.

Based on the analysis and interpretation of the documents, the conclusions that address the evaluation of senior secondary school geography topics in addressing contemporary societal needs were addressed and evidence from the documents have been used to support the claims and findings.

Table 3: Summary of Methodology

Objectives	Data collection methods	Data collection tool	Sampling methods and sample size	Data analysis methods
To evaluate the relevance of geography topics in addressing contemporary societal needs in Kasama District.	Semi- structured interview, Focus group discussions	Interview guide, note book, pen and recorder	Homogeneous purposive sampling of 10 geography teachers and 10 learners, Expert purposive sampling of 3 lectures	Thematic analysis
To explore of topics to be included and excluded in the senior secondary geography syllabus	Semi-structured interview, document analysis	Interview guide, audio recorder, Geography syllabus	Document/ content analysis, 10 geography teachers	Thematic analysis
To propose a framework that contextually responds to socio- environmental needs of Kasama District.	Semi-structured interviews, focus group discussions	Interview guide, audio recorder, note book and pen	20 respondents, 3 key informants from university or college and 1 from C.D.C and 1 from ECZ.	Thematic analysis

Source: Field data 2024.

4.8. Ethical considerations and Trustworthiness

This study adhered to ethical principles and ensured trustworthiness throughout the research process.

4.8.1. Ethical Considerations

The researcher pursued ethical approval from the Humanities and social sciences ethics committee of the University of Zambia, before conducting the research. Therefore, the researcher went to the DEBS' office and school Head teachers of the selected schools to ask for permission and made prior arrangements for administering semi-structured interviews, focus group discussions and document analysis. Participants provided informed consent after being informed about the study's purpose, risks and benefits. Participants were made aware that participation was voluntary, and they could decide to withdraw at any point in time if they wished so. Creswell (2014), states that the researcher has an obligation to respect the rights, needs, values, and desires of the informants. The researcher also ensured that confidentiality and anonymity of the participants is maintained through the removal of any identifying characteristics before widespread dissemination of information. The participants were informed of the purpose of the study and analysis to be used, and the manner of publishing the outcomes.

4.8.2. Trustworthiness of the study

To ensure credibility and trustworthiness of the study, the researcher considered triangulation, validity, credibility, conformability and transferability (Neumann, 2014).

4.8.2.1. Credibility

Credibility refers to the value and believability of the findings. This aspect of trustworthiness was used to make sure that the researched findings were robust, rich, comprehensive and well developed through incorporating elements such as triangulation and member checking of data (Cope, 2014). To fulfil this aspect in this study, the researcher used reliable data collection methods such as a recorder and note taking in focus group discussions and semi structured interviews based on evaluation of the relevance of senior secondary school geography topics in addressing contemporary societal needs in Kasama District. Furthermore, the researcher discussed the participants' responses with them and they were able to check if they were accurately interpreted and added more information and made clarifications where they were miss-quoted. Data triangulation (multiple data sources) and member checking ensured accurate representation of participant experiences.

4.8.2.2 Confirmability

According to Tobin and Bergley (2014), confirmability is the degree to which the research findings can be confirmed or corroborated by others. Casey and Murphy (2013) contend that confirmation is the process of comparing gathered data from multiple sources to explore the extent to which findings can be verified. To comply with this ailment, evidence of collected data will be safely archived for five years in case the findings on Evaluation of the relevance of senior secondary school geography topics in addressing contemporary societal needs in Kasama District get challenged. The researcher's supervisor conducted audit trials to enhance compliance with confirmability. Audit trials and peer debriefing ensured objectivity and minimized research bias.

4.8.2.3. Dependability

Dependability refers to the stability and consistency of the research process and findings over time. It addresses the question 'would the study yield similar results if repeated?' therefore, to ensure dependability this study employed, a detailed research design and methodology, consistent data collection procedures. Detailed documentation of research procedures and decisions ensured transparency and reproducibility

4.8.2.4. Transferability

Transferability refers to the extent to which the study's findings can be applied or generalized to other contexts, setting, or populations. The findings of this study may be transferable to similar educational settings, senior secondary geography topics context and studies focusing on teacher experiences on geography education.

4.8.3. Data Triangulation

Triangulation is one of the most important ways to improve the trustworthiness of qualitative research findings (Yin, 2003). It arose from an ethical need to confirm the validity of the processes, and in the case of studies, it can be achieved by using multiple sources of data (Arifin, 2018). It is an approach that uses multiple data sources, multiple informants, and multiple methods to gather multiple perspectives on the same issue, and gain a more complete understanding of the phenomenon. Triangulation will be used to compare data to decide if they corroborate (Creswell, 2013), and thus it will validate the research findings. In this study, data will be collected in various

ways such as unstructured interviews, documents, semi-structured observations and focus group discussions.

The benefit of triangulation in a qualitative research is that it helps to verify findings and increase confidence in the results. Apart from that, by using multiple methods or sources, triangulation can reduce the impact of individual biases or errors and demonstrate a rigorous and systematic approach to research, enhancing the credibility of the findings.

4.9. Delimitation of the study

Delimitation refers to the boundaries which specify the region under study, (Neuman, 2011). Creswell, (2014) also maintains that these are the borders within which the study would operate. Hence, this study confined itself to evaluating the relevance of geography topics to societal needs in Kasama district. The coverage of the study was 5 public and mission urban and rural schools. In this study, public schools referred to schools solely owned by the government. Private schools were not part of the sampled schools because at the time of this research there was no private secondary school offering geography in Kasama district. However, one mission school was covered in the study.

This study was limited to Kasama district and excludes other districts in the province due to accessibility. Kasama was easily accessible ensuring timely data collection. Other districts such as Luwingu, Mporokoso, Nsama, Kaputa, Lunte, Mbala and Mpulungu were excluded due to limited resources, the need for in-depth analysis and concentrating on Kasama district allowed for in-depth exploration. While this study's findings may not be generalizable to all districts, they provided valuable insights into specific aspects of Kasama district. Future research can explore similar context in other districts.

4.9.1. Limitations of the study

Limitations are the potential weaknesses in the study which are out of control of the researcher (Neuman, 2011). Hence, this section outlines factors that affected the outcomes of the study in some way. This study was qualitative in nature and employed unstructured interviews with teachers and lecturers as well as geography specialists and a focus group discussion with students. In order to reduce subjectivity, the researcher endeavored to maintain focus of the research by concentrating on particular public and mission secondary schools that offered geography as a

course of study leaving out private and community schools. The private and community schools were not part of the study because at the time of the research, there was no private or community school that offered secondary education. The schools were purposively selected because they met the requirements for this study and those left out did not meet the criteria for selection. This, however, limited generalization to all schools in Kasama district as including all schools would broaden the scope of the study.

The study was limited to a certain period of time as it was negatively affected by National Examinations that took place during the period of data collection. The study also had a limitation as it was affected by the institutions various operations during that time period. The late opening of schools due to break outbreak of cholera in most parts of the country affected the study as it delayed the data collection process. The study was also limited to purposively selected schools as including all schools would broaden the scope of the study and some schools did not offer geography subject. Apart from that, the study only sampled out 24 participants which was a small number and might not generalize the findings. But since the study is a qualitative one it needed a small sample size so that in-depth data was collected. Putting it all together, the study was confined to Kasama district of Northern Province, Zambia.

4.9.2. Chapter Summary

This chapter presented methods and procedures used to collect data. The methodology chapter served as a critical component of the research process by providing a detailed account of the methods and procedures used to conduct the study. The chapter covered methods and procedures for data collection, it also looked the research design, target population, sample size and methods of data analysis. It ensured transparency, transparency, accuracy and validity while aligning closely with the research objectives and ethical considerations.

CHAPTER FIVE: PRESENTATION OF FINDINGS

5.1. Overview

This chapter presents the research findings which have been presented according to research questions and data obtained have been presented in verbatim. A number of themes emerged from the data that were collected and have been presented as answers to the research questions.

5.2. Demographic Characteristics of participants

Three (3) categories of participants were involved in the research; college lecturers, secondary school geography teachers teaching senior secondary school pupils and senior secondary school pupils/ college students taking geography as their course and subject of study respectively. A total number of ten teachers and three lecturers participated in the research. There was no HOD who was geography oriented in all the secondary schools that were sampled. Out of thirteen participants who participated in the research four were females and nine were males, indicating there were more male geography teachers than females meaning.

Table 4: Characteristics of Lecturer and Teacher Respondents

School	Participant	Gender	Length of service	Highest qualifications	Obtained from
A	P1	M	18	BA. ED	UNZA
	P2	F	9	BED	Kwame Nkrumah
B	P3	M	9	BED	Kwame Nkrumah
	P4	M	20	BED	ZAOU
C	P5	M	7	BA. ED	UNZA
	P6	F	10	BA. ED	UNZA
D	P7	M	21	BA. ED	UNZA
	P8	M	25	BED	ZAOU
E	P9	F	14	BED	Kwame Nkrumah
	P10	M	25	MED	Makerere University
College	P11	M	19	MSSP	UNZA
College	P12	M	27	PHD	UNZA
College	P13	F	24	BED	Kwame Nkrumah

Source: Field data 2024.

Table 5: Characteristics of Student participants

Gender	**Did geography at secondary school**	**Currently studying Geography**
Male	3	6
female	4	4

Source: Field data, 2024.

Findings for Table 4 were that data were collected from well qualified and experienced participants with wider knowledge in geography teaching because all participants were graduates with a good number of years in teaching.

The study was supposed to include three heads of departments who were geography teachers but at the time of data collection no HOD was found to be geography trained in the schools that were sampled. Only one geography teacher was interviewed at School A because the other one was unavailable at first and the researcher had to go back to the same school after rescheduling the appointment. Two teachers were interviewed at school B, school C two, school D two teachers and school D two. Three lecturers were interviewed from Kasama college of education who were geography lecturers. The three lecturers interviewed one was female while two were males.

Besides that, the study also included two officials, of which one was from Curriculum Development Centre (CDC) and the other one was from Examination Council of Zambia (ECZ) both geography experts. The researcher managed to interview twenty-four participants of which four were female teachers and three female students (through a focus group discussion) and thirteen male participants of which two were lecturers, five were geography teachers, seven geography students (interviewed through focus group discussion) and two geography experts.

Table 6: Total Number of Participants

Categories of participants	**Gender of participants**		**Total**
CDC SPECIALIST	1	0	1
ECZ SPECIALIST	1	0	1
LECTURERS	2	1	3
TEACHERS	5	4	9
STUDENTS	7	3	10
TOTAL	**16**	**8**	**24**

Source: field data 2024.

Table 7: Gender of Participants - Teachers and Lecturers

Sex	Number of participants	Percentage
Male	9	69%
Female	4	31%
Total	13	100%

Source: Field data 2024

Findings in Table 7 show that most, 9 (69 %) geography teacher participants were male while the minority 4 (31 %) were female. This pattern was similar to the college enrolments which recorded fewer number of females who pursued studies in geography as a course of study.

5.3. Age of participants

The researcher wanted to establish the age limit of the participants. Findings show that the age of participants ranged from 25 to 55. This is an indication that all participants interviewed were mature enough and able to analyze the relevance of geography topics in addressing issues affecting their society according to their experiences. Further, the participant sought to find out the education levels of her participants, and Table 8 below gives the details.

Table 8: Education Level of Teachers and Lecturer Participants

Participants	Diploma	Bachelor's Degree	Master's Degree
Participants 1		×	
Participants 2		×	
Participants 3		×	
Participants 4		×	
Participants 5		×	
Participants 6		×	
Participant 7		×	
Participant 8			×
Participant 9		×	
Participant 10		×	
Participant 11		×	
Participant 12	×		
Participant 13		×	

Source: Field Data, 2024.

Findings from Table 5.4. show that participants were well educated and had all that was necessary to share their experiences and insights on the relevance of geography topics in addressing societal needs.

Table 9: Teaching Experience for Teachers and Lecturers

Participant	Gender	Subject trained to teach	Number of years in Service
Participant 1	male	Geography/ Re	9
Participant 2	male	Geography /History	24
Participant 3	Female	Geography/ History	6
Participant 4	male	Geography/ civic Edu,	12
Participant 5	Female	Geography / RE	6
Participant 6	Female	Geography/ Civic Ed.	20
Participant 7	male	Geography/ History	8
Participant 8	male	Geography /RE	9
Participant 9	male	Geography/ Civic	17
Participant 10	male	Geography / RE	26
Participant 11	male	Geography / RE	17
Participant 12	male	Geography/ History	18
Participant 13	female	Geography / Civic	24

Source: Field Data 2024

Findings from Table 9 show the number of years each participant had been ~~the~~ teaching. The data revealed that each participant with more than five years of teaching experience in geography, which means that they had enough experience to share the successes and challenges that they encountered with the senior secondary geography topics in meeting societal needs. When saturation was reached the researcher did not stop but rather continued to collect data to the last participant who seemed to have different views on certain research questions. This would have been the same if the researcher stopped on saturation point.

5.4. RESEARCH QUESTION ONE: How relevant are the senior secondary school geography topics in the geography curriculum in addressing contemporary societal needs in Kasama District?

5.4.1. General overview of participants

The aim of the research question one was to assess the extent to which the topics covered in senior secondary school geography curriculum align with and effectively address the contemporary challenges faced by society. The researcher sought information from secondary school geography

teachers, geography lecturers and students taking geography as a course of study. The results indicated a significant majority 79.2 percent of the participants (19 out of 24) believed that some senior secondary school geography topics were irrelevant to the current needs of society. Included in the presentations include but not limited to environmental issues, climate change action, urbanization, globalization, and solid waste management among others. Most participants said the issues mentioned above such as climate change, environmental hazards and solid waste management should be included in the curriculum to make it effective and responsive to current issues facing society. Only 20.8 percent (5 out of 24) participants thought that all topics were relevant. The findings suggested that there was need to review and update the geography curriculum to ensure that it is more relevant and responsive to contemporary societal needs. Some geography teachers who were participants said that some topics were not adequately relevant more especially those on physical geography part where learners only learn in abstract and cannot figure out the things being studied or fail to make sense out of them.

While other topics were relevant such as Agriculture (Farming), Forestry, environmental issues, fishing in Zambia and wildlife and tourism. Physical geography was perceived as abstract because of its complexity, lack of tangible examples for learners and lack of exposure for other learners. Teaching physical geography was also somewhat challenging for teachers as there are no teaching materials to present to learners. Teachers interviewed accepted that learners were able to use some skills earned at school more especially agricultural skills. One teacher narrated that land tenure was used by learners when selecting what type of land to buy because they understand the advantages and disadvantages of different land tenure systems. On farming, some teachers said the questioning technique is somehow challenging because the examples of crops given are alien to learners and teachers themselves, what is taught to learners were crops that are local and known by learners but what comes in the exams sometimes are crops that learners and teachers do not know crops like sun hem, barley to mention but a few.

5.5. Research question two: what is the Relevance of Geography topics to societal needs in Kasama District

The majority participants were of the view that some topics were relevant and were of the that, geography topics help people understand contemporary issues that the world faces and others were

of the view that the curriculum needed to be enhanced or strengthened because some important topics which can address contemporary issues in society were missing, such topics as environmental hazard, climate change though they needed to be enhanced so that more details can be added. However, participants responded differently according to their experience.

Some of the responses were as follows:

> *Yes, they are. Senior Secondary Geography topics are all relevant in some way, I have said that because they help learners have the understanding of life challenges, in as much as they may look to be irrelevant all topics relate to one another for example you cannot understand volcanism and farming without prior knowledge of the structure of the earth. (P1, School A; 16/10/2023).*

On the other hand, the second participant interviewed from school A had a different view and he said that:

> *No, not all topics are relevant. The human component of senior secondary school geography is relevant to learner's skill acquisition and societal needs an exceptional of components mining because this area is not in a mining region, the sub-region is very difficult for learners to master the foreign names and some components of physical geography is not helpful to the needs of society (P2: school A; 07/11/2023).*

Furthermore, another participant on answering the third question said that:

> *some knowledge is being utilized quite well for example when they learn about forestry they are able to plant tree and sell this shows how relevant some of the topics apart from the sub region (P2….).*

In support of what others two participants alleged, one participant from school B ~~also~~ explained that:

> *Most of the topics are relevant to the pupils. Though most topics on physical geography seem not to be very relevant and does not apply to learner's reality and contributes to learners' loss of interest in geography. Physical geography topics has been perceives as challenging by learners making the subject as to be very difficult. (P3, school B, 08/11/2023).*

In responding to the same question, the fourth participant also added that:

> *The senior secondary geography topics are not really addressing the needs of society because most topics are just learned theoretically without even understanding the topics them, learners just memorize the concepts taught to them in abstract without even understanding it (P4, School B, 16/02/2024).*

In the same vein participant number five explained to say:

> *Not really, some topics are not helping our society that much because pupils learn what they can't experience those topics on the sub region are irrelevant to learner's practical life (P5, School C, 19/02/2024).*

Participant six furthermore said that:

> *Some yes they are, in as much as we are supposed to learn from other countries, we should not be over dependent on them, we have to work on our own for instance tourism in the sub region should not subject our learners to memorizing tourist attractions in other countries because there is no skill being obtained from that to subject learners to examination on the names of places where minerals are mined in other countries. (P6, School C19/02/2024)*

Another participant on the same question or issue said that:

> *some topics are not relevant to societal needs for instance learning about the physical geography is mostly theoretical and based on abstract assumptions, it does not add value to the societal needs. (P7, School D 20/02/2024).*

When asked to clarify which topics specifically were not relevant to societal needs and theoretical in nature, Participant 7 explained that:

> *No, topics such as earth movement where tensional and compressional forces are covered, volcanism, earth rotation and revolution are some of the topics that make learners loose interest in the lessons because these topics are not related to reality. Geography topics unfortunately starts from unknown to known which makes it even more difficulty for teachers*

to bring reality to what learners can't see and comprehend (P7, School D, 22/02/2024)

All the same, participant eight gave an explanation to say that: *some topics are not relevant to societal needs in Kasama district* and further expounded that:

the topics on the sub-region are there as an example but does not address the needs of society and therefore, should not be examinable. If a learner is asked to name four cars made by Toyota in Kenya and an area of gold mining in south Africa, what skill is there to obtain that can help society? Moreover, there a big difference between minerals mined Zambia and other countries in the sub region and I don't see any value in asking learner's questions in things that does not matter in societies they live. (P8, School D, 22/02/2024).

One participant, on the same question had this to say:

some topics are not essential to the needs of society and that of the learner and therefore, needed to be reviewed and add on something that will help learners acquire a skill just like it was realized in 2013 that some topics did not add value to our children's long-life skills and removed them from the curriculum (P9, School D, 23/02/24).

When another participant was asked the same question how relevant are senior secondary school geography topics to societal needs in Kasama district? The response was that:

I can say they are both relevant and irrelevant. I say so because there are topics which are still missing in the syllabus that are very vital to the needs of society. Some topics I would say they are relevant more especially topics like farming, tourism, environmental hazards and disasters though not so detailed as to cover pressing issues facing society today like global warming, climate change and mitigation measures. (P10, School E 23/02/2024).

Another participant said that

> *Topics to do with earth movement and rotation and revolution of the earth are not relevant (P11, col, 23/02/24)*. When asked to explain further, he said; the topic *had no skill for the learner to acquire from it.*

When asked how relevant senior secondary school one participant said that:

> *All topics are relevant but some need to be revised and concentrate on global warming and electric vehicles that are now modern. It is a pit that we fail even to make geography practical when it is possible for us to do that. We cannot be visiting far places just to look at a weather station, let's have a weather station at schools and if we are teaching about rocks let's have the different types of rocks because they are readily available. Even when we talk about farming let's talk about green and conservation farming and even engage in a practical way of doing it (P11, Col, 23/02/2024.*

Participant 12 also added that:

> *the topics are relevant but needs to be restructured and improved to incorporate climate change (12, Col, 26/02/24).*

In addition to this the key informant from CDC said:

> *Yes, the geography syllabus needs to be improved so that more of the local context is covered. Foreign topics do not bring value to our learners. We can only learn from other countries how they are dealing with such issues.*

This response was in line with what most of the participants said about the sub region that only examples or lessons can be learnt from other countries how they are dealing with issues affecting society rather than learning and mastering names of areas.

The key informant from ECZ said that:

> *all topics in the syllabus are very relevant and can be tested in the exam. Geography being a living subject a component of contemporary issues such as natural disasters and measure to address any social issues.*

5.5.1. Summary of the findings on research question one:

Three quarters of the participants indicated that some topics are relevant while others are not and cited examples of most physical geography topics that they focus more on historical geography rather than current issues affecting society and more specifically they cited topics on the sub region to be irrelevant because of the way they are presented in the national exams that they are more of memorization than practical to learners that is the reason why according to participants many students do not attempt section B at grade 12 exams and the reason why learners fail geography paper one. The next section presents answer to research question two.

5.6. RESEARCH QUESTION TWO: Why should some topics be included and excluded in the senior secondary geography syllabus in Kasama District?

The adequacy of current geography topics in the senior secondary school geography curriculum can vary depending on various factors such as evolving societal needs and the specific content of the geography curriculum in addressing societal needs. While some current geography topics in the senior secondary school curriculum may address some societal needs, there is continually room for improvement to ensure that the curriculum remains relevant, inclusive, and effective in preparing students to navigate a progressively multifaceted and interconnected world, the question was: *Why should some topics be included and excluded in the senior secondary geography syllabus?*

5.6.1. Topics relevant to societal needs to be included and excluded in the geography syllabus.

In an effort to have deeper understanding of the gaps in the geography syllabus, some questions were asked to find out what topics were supposed to be included in the senior secondary geography syllabus, the following were some responses from the participants:

One participant said:

> *Topics that done at junior level should be repeated at senior level on advanced level at senior secondary because we cannot rely on the knowledge acquired at junior level. It is too shallow moreover learners tend to forget most of the things they learnt at junior level (P1, School A, 07/ 11/23).*

She further said that:

> *topics covered at junior level are not very advanced and does not contain a lot of information, there are pitfalls and mismatches in the senior secondary school geography topics that need to be revisited*. (P1, School A, 7/11/23).

The teacher again added that:

> *at the SOSTAZ meeting it was highlighted that some topics especially those that come in paper one exams are not in the syllabus examples were the structure of the earth, layers of the atmosphere and subsistence farming methods which are not in the senior secondary school geography syllabus.*
>
> *All topics are relevant, but ICT is needed to be incorporated in the geography topics. Environmental education should stand on its own because it is through environmental education that will bring about education for sustainable development (07/11/2023).*

Participant two mentioned that:

> *Some topics in human geography are relevant but we need topics that are able to provide skills to learners such as agriculture and fishing though not in the syllabus and should be learnt practically not theoretically only.*

When asked which topics are relevant to the needs of society and may be included in the curriculum, Participant 3 stated that:

> *Topics in the senior secondary school geography syllabus are not done systematically but they are done in jumbled manner because you will find that in grade 11 learners learn world agriculture again we go back to agriculture in Zambia in grade 12 this makes the topics to look so up hazard manner.*

When asked which topics should be included and excluded in the syllabus Participant 4 narrated that:

> *the topics that need to be included are those that give learners skills that can help them in life. The concentration is so much on crop farming but when we look at Agriculture it covers a wide range of activities such as poultry farming, plantation farming where learners are taught how to plant trees, Bee keeping, fish farming so that even when a learner does not*

do well at school at least he/she will have a skill that will help cope with life challenges. Our education is too bookish that is why poverty cannot be eradicated in our country. People lack skill to utilize the plenty land and abundance of rainfall, the only skill people can learn from friends and relatives is the skill of cutting down trees and burning charcoal. To be excluded are those topics where learners memorize gold mining areas in South Africa, those are not necessary. (P4, School B, 16/02/24)

In addition to that participant 5 assumed that:

the topics to be included are fishing in Zambia because Zambia is endowed with many rivers and wetlands. Fishing is important to our society as it gives learners a skill that can use to survive and when you look at most people in Zambia have ventured into fish farming because it helps societies we live in. plantation farming where learners can be taught how to plant Bananas and other crops that maybe readily available in communities we live in. The problem with our education system is that we educate learners to be employed by the government and not to be self-reliant. (P5, School C, 19/02/24).

On research question number two which tried to find out what topics should be included and excluded in the syllabus, participant 6 said that*:*

Climate change and environmental education because so far, we are struggling with issues of climate change and awareness would be through incorporating climate change action in geography education.

On the other hand, participant seven said that:

Environmental studies should be included, more so population issues to do with street vending, energy and power should include energy crisis which can cover substitutes for hydro- electric power in case of drought, this can cover causes, crisis and solution to energy crisis.

In support of the above, participant eight said that:

> *The content of most geography books is out dated and there is need to ensure that research is done extensively and new books produced to match with the contents of the curriculum.*

In responding to research question two participant nine narrated that:

> *Before the inclusion and exclusion is done there is need to work on the syllabus itself, to restructure it so that it can make sense and be orderly. Though Zambia produces coal it is not mentioned anywhere in the examples given in the books for geography on sources of energy where other coal producing countries have been mentioned and the examples that are there are from other countries. There is a lot of repetitions in the way the syllabus is arranged. It should be arranged systematically.*

Participant ten also added to say that:

> *"Waste management is an important topic that can be considered for inclusion because many people in communities where they live do not know how to manage waste that is why we are struggling with the issues of breakout of pandemics like cholera (P10, School E).*

5.6.2. Geography topics to be included or excluded in the syllabus

It is imperative to note that according to the findings the relevance of topics in geography education can vary depending on factors such as regional context, educational goals, and the interests and needs of students. Therefore, curriculum developers should continuously evaluate and adapt curriculum content to ensure that it remains responsive to societal needs and educational objectives.

When asked what topics to be included in the geography syllabus a student's response was that:

> *Topics to be included in the Geography curricula should encompass topics that are relevant to contemporary societal challenges such as climate change and mitigation measures, urbanization, environmental education, natural resource management, waste management and pollution. If the*

curriculum adequately covers these issues, it can better prepare students to understand and address real-world problems (S1, FGD 1, 23/02/2024).

The participant emphasized that environment education should take into consideration more especially on pollution, waste management, recycle, reuse.

To explain on what should be included in the Senior Secondary School Geography topics on student two on focus group discussion said that:

The topics that need to be included in the senior secondary school geography curriculum are climate change, environmental education, waste management, fishing and disaster management should be detailed. (S2, FGD 2, 25/02/2024).

Learner 3 said the topic that they think can be included is technology because it was very important in modern society as almost everything has to use technology.

To support what the other learners said leaner three added that: *technology needs to be included in the geography curriculum so as to help in map designing and drawing. (S3, FGD1, 23/02/2024).*

Student 5 said topics that are not relevant are those that talk about the sub region and are not important to the needs of society. Honestly what will be mastering of the areas of mining and farming in another country where I will not go to do mining or farming benefit me? I feel those topics should be done away with. (S4, FGD2, 25/02/2023).

Student 4 said that topics that are irrelevant are those on planets, clouds and solar system. They don't help our society.

When asked if the students have ever used the geography knowledge that the obtained from school in their communities?

S1 said that, *yes, I have used the knowledge on methods of fishing to get fish and educated other that they should not use poison to catch fish as*

poison kills everything in the river including small fish that may be needed tomorrow by us.

Students had varied perspectives on geography topics depending on one's understanding.

On the other hand, some teachers said that there is need to improve the geography curriculum more especially the physical geography aspect which is abstract and theoretical. They cited topics like earth movement and the solar system were irrelevant to the needs of society:

> *Geography topics on sub region, solar system, rotation and revolution of the earth, and transportation systems can provide insights into managing urban growth and addressing infrastructure challenges that society is faced with. But the challenge is that transport and communication only focus on what type of transport is available, advantages and disadvantages of various types of transport systems (P1,2,3,4…, School A, B, C, D, E. 19/02/2024).*
>
> *Students said that technology should be included in the syllabus because everything nowadays is about technology.*

Climate Change in the senior secondary school Geography topics is not fully cover and content need to be fully detailed as stated by the participants. Geography topics on climatology, weather patterns, and geographic information systems (GIS) can contribute to understanding climate change impacts and adaptation strategies. It was therefore, emphasized that climate change should be included in the geography syllabus of senior secondary.

When asked how the geography lecturer keep updated to the latest development on geography topics. Lecturer1 said that:

> *I'm often guided by education curriculum frame works and the new policies. The other way is, I get updated through research and when new information comes up I'm usually up to date. When asked about the relevance of the topics in the senior secondary syllabus he said the content*

is the ok though there are some repetition here and there that needs to be ironed out. (P11, Col, 20/02/2024).

When asked what topics he would suggest should be include in the geography curriculum he said:

Topics in the syllabus are not well structured, there a lot of repetition on topics that are supposed to be covered once and for all and the syllabus has some gaps more especially on the climate change it is not well covered so that learners on the onset know how to mitigate the effects of climate changes as populations continue to increase. Climate change is real and it is an issue that has attracted a lot of debates in many conferences. (P12, col, 20/02/2024)

He further said that:

the syllabus should change and bring in more issues that are affecting us today, it should include population control because it is population that is putting pleasure on the resources. Tourism also has some gaps because it focuses on issues like tourist attractions leaving out the component of hospitality industry (lodges and tours). When such skills are given learners can be entrepreneurs who may be involved in hospitality industry (P12, Col, 20/02/22024).

When asked on the topics to be included he further narrated that:

The knowledge on environmental education is the most important knowledge that geography syllabus should emphasis. Poverty alleviation is another component to be considered and agriculture as a topic should be done practically, learners can be doing projects based on the topics they learned that can earn them a skill for life. Geography field project though not on the syllabus should be included where learners should learn more about research because it is through research that we are able to solve societies challenges. Though in literature review field project was talked about as a component that would make geography more practical.

> *Field project should be included in the curriculum so that teachers have ample time in teaching it to the learners. Global environmental problems and issues to do with pollution.*

When asked what topics he thinks are irrelevant to societal needs he said:

> *Topics to do with the rotation and revolution of the earth does not affect humanity.*

In addition to what participant 11 said participant 12 explained this when asked how he is kept updated with latest information on environmental issues affecting society he said:

> *Through internet, news, subject associations and reading books.*

When asked which topics are relevant he said:

> *farming and mining though new methods need to be incorporated on other types of farming methods because what used to be shifting cultivation may not be shifting cultivation as the population is increasing and people have become settled cultivators rather than shifting cultivators, therefore topics need to be revised (P12, Col, 20/02/2024).*

He further said that, *the topics should be practical I think it is the way geography is taught that makes it more abstract and theoretical. When we talk about electricity let it be more practical than theoretical we need to take learners to where electricity is produced so that they earn a skill from there.*

When asked how relevant are geography topics to societal needs Lecturer3 who was participant 13 said: *yes, they are.*

The participant further added that:

> *There is need to include environmental education in the senior secondary geography topics in order to mitigate societal challenges. Environmental Degradation is a topic on physical geography which includes ecosystems, and environmental conservation which can help students understand the*

causes and consequences of environmental degradation and explore solutions (P13, col, 21/02/2024).

5.7. Overall/general views of lecturers, teachers and students.

The general overview of the participants was that some topics on the sub-region are not so relevant to societal needs in Kasama district, as they only emphasize on memorization than skill acquisition. They also added that the contents of most books in geography needs to be revisited and worked on to suit the current societal issues.

Several pressing societal needs that could be included in the geography curriculum to ensure students are equipped to understand and address contemporary challenges effectively emerged in the discussions persistently were climate change and environmental management which was said can fall under environmental education. The topics would broaden the societies knowledge over caring for the environment.

In responding to research question two the key informant had a view that:

> "*the syllabus is effective in addressing societal needs, it's just that teachers have a negative attitude towards the subject itself. Teachers need to help learners to understand the topics and put into practice the contents.*

The key informant gave a number of examples of topics in the syllabus that able to address the needs of society. Hazards and disasters, population change and factors contributing to population growth.

In addition to that the key informant from ECZ explained that:

> *It was not a mandate of ECZ to choose or determine the topics to be included in the Examination, exams are set based on the topics and specific outcomes as stated in the syllabi developed by CDC.*
>
> *He further narrated that ECZ does not set exams outside the syllabus, all questions are linked to the specific outcomes from the syllabus.*

5.7.4. Summary of findings on geography topics to be included and excluded in the senior secondary geography syllabus.

The purpose of this section was to answer research question number two: what geography topics should be included and excluded in the geography curriculum to contextually fit it with

contemporary societal needs in Kasama district. Most of the participants suggested that in addition to wildlife and tourism, forestry and Agriculture, climate change is one of the topics to be included. Other topics suggested were; Environmental Education, Climate change, Global warming, ICT, Waste management, Pollution, Disaster management and mitigation measures. Others suggested that Deforestation has to be detailed with examples from some case studies happing locally.

5.8. RESEARCH QUESTION THREE: What framework for geography may contextually respond to socio-environmental needs of Kasama District?

The research question number three guided the researcher to elicit information from teachers, Lecturers and students as well as key informants from ECZ and CDC to propose a frame work that would contextually respond to socio-environmental needs of Kasama district.

5.8.1. Framework for geography that contextually respond to socio-environmental needs of Kasama District?

To design or propose a framework that contextually respond to socio-environmental needs of Kasama district, most of the participants said that it required a comprehensive framework that integrates local context, challenges and opportunities. This would be done by providing socio-economic fabrics of Kasama district which would include studying demographic patterns, economic activities (such as Agriculture, forestry and tourism), infrastructure development and socio-cultural dynamics.

According to the findings and participants' perspectives, the environmental context of geography topics would involve introducing features of Kasama district, including its diverse ecosystems and climate patterns, natural resources and environmental challenges such as deforestation, soil erosion, waste management and pollution. These should emphasize the interconnectedness of anthropogenic activities and the environment. The research question was: *what framework for geography may contextually respond to socio-environmental needs of Kasama District?*

When asked what framework for geography may contextually correspond to socio-environmental challenges? Participant one (P1) said that:

> *The structure of the syllabus itself should be redesigned to align topics in a chronological order. This is in line with the theory CIPP by Stufflebeam*

and Shrinkfield (2007) on content and product evaluation used to understand the rationale for determining the relevance of geography content that would lead to evaluation of topics in the senior secondary geography curriculum and topics to be included and excluded.

The second participant (P2) said that:

The structure of the earth should be included in the syllabus because most questions relate to the structure of the earth and exam questions comes on farming, volcanism and faulting and folding in relation to the structure. The content of the geography syllabus should be revised more especially on the outdated information. Today it is challenging to give information in books to learners because I may say the largest producer of rice is Pakistan when in the actual sense it is china this may have an impact on the learner's results.

When asked what framework for geography would contextually fit in with socio-environmental needs of society? Participant 3 responded to said:

There are a lot of gaps in the geography syllabus that needs to be worked on because we may end up misleading our learners about information that has changed over time. The framework for geography should be quality and standard in covering all areas that need to be included more especially modern challenges facing our communities and how to curb them.

Student 1 in focus group discussion 1 said that:

There are topics that are irrelevant to the needs of society, for instance, overly abstract or theoretical concepts that have little connection to real-world issues may be considered less relevant these are planetary winds, types of mountains, earth movements to mention but a few. (L1, FGD, 23/02/2024).

Most of the students interviewed at the college said that they did not do geography at senior secondary school though they are doing it at the college level for the first time. That was partly the reason why even teachers themselves face challenges in the teaching of geography.

One student narrated that:

> *It was somehow difficult Understanding of contour lines and map features are so challenging because we are just learning them so it was somehow a challenge to teach others.*

While historical geography can provide valuable insights into understanding the development of landscapes and societies, topics that focus solely on historical events or phenomena without contextualizing their relevance to contemporary issues were considered less relevant to societal needs, topics such as revolution and rotation of the earth and the solar system. Topics that focus on memorization of geographical facts or trivia without fostering critical thinking, problem-solving skills, or a deeper understanding of geographical processes and phenomena were viewed as less valuable in addressing societal needs.

Student 2 of a focus group discussion explained that:

> *The less relevant Geography topics are those that excessively rely on abstract models and mathematical concepts without grounding them in real-world examples or applications. These may be seen as less relevant in addressing the practical needs of society examples are time calculation, angles of elevation and models such as town models (concentric and sector models) as well as demographic transition models (FGD, 23/02/2024).*

'Student 3 said the knowledge obtained in geography has made our family improve on methods of farming and venture into best methods of conservation.

5.8.2. Views of the key informant from CDC

Having presented the purpose of the study which was to evaluation the relevance of senior secondary geography topics in addressing contemporary societal needs to the key informant, the following were the questions asked in relation to the research question: how do you assess the effectiveness of senior secondary school geography topics?

He said that:

the content of the geography syllabus has to be reviewed so that new issues are incorporated and topical issues to be addressed. The world is dynamic and things are changing so there is need to focused on green growth and greening the economy.

He said that, *CDC is currently working to improve the syllabus to ensure it includes green growth and other relevant topics that would help the nation and societies at large.*

The response showed that the senior secondary school geography syllabi needed to be revised in accordance's the changes taking place in the natural environment and in accordance to challenges that society is faced with. The overall participants indicated that the senior secondary school geography topics may be effective in addressing contemporary societal needs but needed to be strengthened and enhanced to meet current challenges facing society.

5.8.3. Views of the key informant from ECZ.

When asked how ECZ determine the relevance of topics to be included in the national examinations. He said that 'ECZ does not determine or choose topics to be included in the national exams. Exams are set based on the topics and specific outcomes in the syllabus which is developed by CDC.

To find out measures that ECZ take to ensure that the examination content reflects the most pressing geographical issues faced by learners and society. The official responded to say that *geography is a living subject, hence the syllabus has topics of component on contemporary issues such as natural disasters,* he further explained that, *ECZ has not been mandated to review the curriculum but used as a scale to measure the learners acquired knowledge, skills and competence*.

On responding to the relevance of topics in the syllabus he said that, *all topics are very relevant and all can be tested in the examination and no questions are set outside the syllabus.* He further explained that *topics taught at junior level cannot be repeated at senior level, that is why topics like fishing, agriculture in Zambia which focuses on traditional and commercial farming cannot be repeated at senior level, therefore at senior level it starts from irrigation farming and conservation farming methods.*

The explanations were indicated clearly by the ECZ subject specialist and were in line with what the CDC specialist explained. There were however, some gaps in terms of communication between ECZ and CDC on the part of setting examinations.

5.9. Proposed framework for geography that would contextually correspond to societal needs.

Different participants gave varied opinions on the proposed framework for geography syllabus that would contextually fit in to address modern challenges facing society today. The tables below show topics that needs strengthening or enhancing, new inclusions and exclusions from the syllabi.

Table 10: Proposed Framework for Senior Secondary Geography Syllabus to be used by CDC

Topic	Subtopic	Content to be covered	Justification
Map work: Basic Techniques &skill	Map reading & interpretation Sketch maps &diagrams Latitudes & Longitudes Local & standard time Apparent movement of the Earth (Angle of Elevation)	Map reading and interpretation techniques. Differentiating maps and Diagrams. Uses of Latitudes and Longitudes. Calculation of time and finding the sun's angle (Angle of Elevation)	Map reading and interpretation, calculation of time and angles of elevation is practical and makes learning of geography more practical and interesting to the learner and teacher.
Weathering and Mass wasting	Major types of weathering Factors influencing weathering. Effects of weathering Mass wasting	Physical, Chemical and Biological weathering Climate, Relief, Altitude Living Organisms, Man's activities (influence). Soil formation, modification of landscapes, Limestone landscapes, flat topped hills, New landforms, Building and construction. Types and Causes of mass wasting Measures to control mass wasting	This topic can be merged with earth structure though it has to be retained because it helps learner to understand catastrophes that take place in the natural land scape
River Processes	Hydrological cycle, River systems and drainage patterns -River Erosion, Transportation and deposition	Processes of water cycle, types of drainage patterns River capture River rejuvenation Action of rivers Importance of rivers to mankind	The topic relates to rain formation and the importance of rivers

Topic	Subtopic	Content to be covered	Justification
Agriculture in Zambia and the sub-region	Land tenure and types Types of farming: Subsistence farming Irrigation farming Plantation farming Arable farming Soil conservation Livestock farming Market gardening	State land, traditional land, Leasehold and freehold. Shifting, settled, Mambwe, Lozi. Factors favoring irrigation farming. Effects of irrigation farming on the environment. Bad agricultural practices' Soil conservation measures and sustainable agriculture Types of live stock Types of crops and economic value	Agriculture must be maintained and improved in areas with gaps. It should begin with known to unknown. Agriculture in the world is alien to the learners therefore, it would be important that Agriculture builds on from knowledge from grade 9.
Forestry in Zambia and the sub-region	Indigenous and exotic. Exploitation of timber Factors limiting commercial exploitation of indigenous trees Problems affecting forests	Valuable timber trees (Soft and Hard wood). Advantages and disadvantages of hardwood and soft wood. Factors limiting commercial exploitation indigenous tree. Problems affecting forests.	Forestry is an important topic and should be maintained and further advantages can also be discussed for indigenous trees and not only disadvantages as though we do not have highly valuable trees like Mukula, Mukwa etc.
Wildlife and tourism in Zambia and the sub-region	Wild life Problems faced by wildlife and tourism industry. Wildlife conservation and promotion of tourism industry	Importance of wild life and tourism. Factors that hinder growth of wildlife and tourism Measures put in place to promote wildlife conservation and tourism industry. Advantages and disadvantages of wildlife and tourism.	Wildlife and tourism should be maintained because it is a source of foreign exchange and revenue.
Mining in Zambia and the sub-region	Mineral exploitation Mineral production Uses of major minerals Stages of mineral processing	Factors influencing mineral exploitation. Production and marketing of minerals Uses of major minerals Stages of mineral processing	The topic on mining should be maintained because mining is of economic value to the nation.

Topic	Subtopic	Content to be covered	Justification
Transport and communication in Zambia	Types and importance of transport and communication Problems and possible solutions	Major means of transport and communication. Importance of transport and communication Possible solution to poor transport and communication	Important topics for understanding trade, transportation and international relations.
Manufacturing and processing industries in Zambia and sub region	Importance of major manufacturing and processing industries. Location of industries	Importance of manufacturing and processing industries. Constraints associated with the development of processing and manufacturing industries	Can help learners understand the connectedness of economies, trade networks and global supply chains.

Table 11: Topics requiring Strengthening by CDC

Topic	Subtopic	Content to be covered	Justification
Weather and climate	Elements and instruments of weather and climate. Climate	Elements and instruments of weather and climate. Factors influencing climate	Weather and climate should be taught as such because it is a continuation of what they learnt in social studies, combining weather and climate to climate types brings confusion to the teachers as some end up skipping climate types whenever they teach weather and climate.
Climate types and natural vegetation	-Equatorial climate -Savanna climate -Desert and semi desert climate -Mediterranean climate	Location, climatic characteristics and natural vegetation characteristics	Climatic types should be taught together with their natural vegetation, after looking at climatic characteristics, natural vegetation of that particular climatic types should be taught. Teaching natural vegetation on its own sounds repetitive.
Natural Hazards and Disasters Management	Natural hazards and disasters Effects on humans, infrastructure and the environment.	Definition of hazard and disaster. Identification of hazards and disasters (Floods, Drought, bush fires, landslides, sinkholes, Rock fall, cyclones)	Natural environmental Hazards and disaster affect people, places and the environment. Therefore, learners should be presented with the hazards and disasters common to their environments and

Topic	Subtopic	Content to be covered	Justification
	(people, places and the environment.	Preparedness, reduction mitigation measures and adaption.	how they can prepare, reduce and find solutions to disasters when they hit.
Farming/ Agriculture	Types of farming Types of crops	Shifting cultivation, Semi-permanent cultivations, settled cultivations, mixed farmers, livestock farming, plantation farming,	More types of farming can be added to the types of farming that are in the syllabus such as poultry farming, Bees keeping, market gardening and many more.
Fuel and energy	Sources of fuel and energy	Hydroelectric, solar power	There is duplication of content covered in grade 11 and 12. Fuel and energy as well as power and energy need to be merged
Power and energy	Location of hydro power station Uses of hydro power. Sustainable sources of power and energy	Factors affecting location and development of hydro power stations Uses of energy. Negative impact of HEP on the environment.	Power and Energy should be merged with fuel and energy to reduce redundancy of content covered and free up valuable instructional time

Table 12: Topics Requiring Removal from Syllabus by CDC

Topic	Subtopic	Content to be covered	Justification
World climatic Regions	Equatorial Mediterranean	Location of natural regions Climatic characteristics	World climatic Regions should be removed because the climatic regions have evolved, there are changes that have occurred over time and some contents have become irrelevant.
Farming	Types of farming	Major farming types Factors influencing farming	To be merged with Agriculture in Zambia
World population	World population distribution	High, medium and low population density	To be merged with Population in Zambia.
Fuel and energy	Sources of fuel and energy	Different sources of fuel and energy. Methods of transportation of fuel and energy. Uses of fuel and energy.	To be merged with power and energy in Zambia a grade 12 topic. Also, to be included are the renewable energy sources

Power and Energy in the Sub-region	Major hydroelectric power stations, Power demand in the sub-region	Locate on the map of Africa major power stations. Describe energy and power needs in the sub-region	The content on the topic is not relevant to meet the needs of diverse learners and mastering major power station in the sub region may not be necessary in solving current challenges in society. But lessons from other countries how they are doing it may be necessary.

Table 13: Topics to be Added to the Syllabi by CDC

Topic	Subtopic	Content	Justification
Climate change and Environmental sustainability	Causes, impacts and solution to climate change. Climate action	Factors influencing climate change Preparedness, reduction, mitigation measures and adaption.	Climate change is a global Challenge and it is important that geography subject which deals with man's interaction with the environment has it included in the curriculum.
Environmental Education	Environmental management. Environmental protection	Solid Waste management Managing school environments Pollution	Socio-Economic and environmental priorities may shift over time, influencing content that is deemed most important for inclusion in the curriculum thus inclusion of Environmental education is vital.
Settlement and population in Zambia	Settlements patterns. Population structure Factors affecting population distribution	Types of settlement patterns. Definition of terms Factors influencing the growth and development of urban settlement. Population pyramids Factors affecting population distribution	Settlement and population should be included in the syllabus to align it with the examination and world population should be merged with this topic to avoid repetition of content.
Fish farming in Zambia	Fish farming Fish farms Fish production	Types of fish Sustainable fish farming/ fishing methods Pond making Feed production	Fishing being one of the skills promoted in schools that can earn learners some long-life skills and tailor the content to meet diverse

			needs of society should be included in the syllabus
The structure of the earth **Volcanism**	Layers of the earth. Earth movements Magnitude, measurement intensity, types	Structure of the earth Faulting and fold Types of rocks Types of mountains Types of volcanoes	For learners to understand earth movements on faulting and folding and types of mountains and volcanism they need information on the internal Earth structure
Geography field project (research)	Practical implementation of a project either planting of trees under forestry, vegetable garden (under farming), rearing of chickens and fish	Proposal writing (Grade 10). Project implementation and data collection (Grade 11) Report writing and presentation of results (Grade 12).	Geography field project would be good if made practical by allowing learners to do practical work on what they intend to do the project on.

Source: Field data, 2024

5.9.1. Themes Emerging from the Data

This study revealed several key themes that shed light on the evaluation of senior secondary school geography topics in addressing contemporary societal needs in Kasama district. These themes emerged from the data collected through interviews, focus group discussions and document analysis. The themes are grouped in distinct categories.

Theme 1: Relevance of Geography Curriculum.

This theme explores the alignment of geography curriculum with contemporary with contemporary societal needs in Kasama district. Participants emphasized the need for the curriculum revision to reflect the current environmental, economic and social challenges.

Sub-themes

- Alignment of curriculum content with societal expectations
- Gaps in curriculum content and societal needs.
- Teachers perspectives on curriculum relevance.

"*The current curriculum focuses on theoretical aspects, but we need practical applications to address local challenges* (interview with Geography teacher)".

Theme 2: Environmental sustainability

This theme examines the role of geography topics in addressing environmental sustainability challenges.

The CIPP model also guided the data analysis by relating to the context in which the curriculum operated such as demographic characteristics of participants, environmental and societal factors. This helped in gaining a comprehensive understanding of the curriculum, identifying areas of strength and weakness and informed decision- making for improvement.

5.10.1. Chapter Summary

The findings in chapter five were presented in accordance to the research questions and objectives. Based on the findings presented it was discussed that some topics discussed above needed to be strengthened or enhanced were power and energy as well as sources of energy which should be included, alternative sources of energy that that encourages green environments and avoid pollution needs inclusion in the syllabus, as such would address the needs of society and that would align them with contemporary societal needs. Some topics needed to be removed topics like equatorial regions because the regions have evolved but the content remained the same giving a wrong facade to the learners. Topics that needed to be new inclusions according to the findings were structure of the earth, population and settlement, climate change and environmental sustainability, fish farming and geography field work. Discussion of findings have been presented in the subsequent chapter.

CHAPTER SIX: DISCUSSION OF FINDINGS

6.1 Overview

This chapter presents discussion of findings which interprets and analyzes the results of the study according to research questions and objectives. This chapter further highlights keys themes or patterns that emerged from data analysis. The key themes and patterns emerging from the data analysis have been discussed. Findings have been interpreted in relation to the research questions, objectives and theoretical framework (CIPP) model.

6.2. Characteristics of participants

A total number of 24 respondents participated in the research, of which nine were males and four were female. Focus group discussion comprised of six males and four females. It was important to discuss the gender of participants in this research in order to understand how participants regarded geography topics in addressing societal needs. It was observed that both male and female participants had slightly similar views over geography topics that were relevant to the needs of society.

6.3. Views of teachers on the relevance of Senior Secondary School Geography topics

In a contemporary world, it is a general belief that geography was essential for preparing the general population for careers, civic lives and personal decision making. Geography was essential for preparing specialists capable of addressing critical society issues in social welfare, economic stability and environmental health and international relations (The road map project, 2011). In a bid to find out how teachers perceived the relevance of the current geography topics it was discovered that the findings were that participants viewed some topics differently according to each ones' experience that is why there was a tally between participants who said the topics were relevant and those who said they were not. While others said the topics were relevant in providing skills to the learners though some improvements were necessary to fill the gaps. Others were not sure whether the topics were relevant or not. Enhancing and strengthening the focus of geography topics was the only way that geography can address the contemporary issues that society is faced with.

6.4. Geography topics to be included in the curriculum

Concerning geography topics to be included in the curriculum, which included such topics as climate change, Environmental education, waste management, structure of the earth, fishing and

fish farming. Such topics are needed because they are topical issues and their impact may be with humanity for ages. Moreover, the findings are in consistence with the works of Goodall (2009), he emphasized the importance of conservation efforts, “the greatest danger to our future is apathy”; he further said “environmental education is not just about teaching people about the environment, it’s about empowering them to take action” (Goodall,2013). Similarly, Stern (2007) highlighted the economic implication of climate change”

On the other hand, Muchanga’s (2011) study about climate change focused on how people perceive and adapt to it, according to his work, some individuals attribute climate change to God, immortality, or even witchcraft. His study also delved into the role of education in promoting climate change adaptation, highlighting the need for contextually relevant educational themes. Further the theory upon which this study is anchored the (CIPP) evaluates the product (in this case geography topics) does support. The Product Evaluation was used to determine whether the topics in question would be worth continuing or modifying. It was discovered that the topics were worth modifying to align them with the changing needs of society.

In the case of climate change about 19 out of 24 participants said that geography could go deeper than it was to look at climate change taking into consideration causes, impacts, role of human activities and solutions to climate change, mitigation strategies and adoption measures. Environmental education was also viewed as one topic that could help in environmental sustainability and conservation efforts which can cover solid waste management and pollution, that content would empower students to be good stewards of the planet earth.

The finding also suggested that Zambia being faced the issue of rapid population growth and majority of the population living in the urban areas, it was important if topics such as urbanization and urban planning were considered for inclusion in the syllabus. Such a topic could explore challenges and opportunities associated with urbanization and urban sprawl, infrastructure development, housing issues and transportation. Urbanization was said to be crucial for creating sustainable, viable and livable cities in the face of rapid urbanization and population growth.

On the technology part, geographical information system (GIS) was also suggested to be included that in the world of technology learners were also supposed to be acquainted with technological skills. Geographical information system had revolutionized the way spatial data is analyzed and

would solve complex geographical problems (2005). Integrating GIS technology into geography would enhance student's spatial analysis skills, data literacy and ability to solve real world issues using geospatial tools that was the reason why the topic was suggested for inclusion in the geography syllabi.

It was interesting to note that out of 24 participants stressed the need for including climate change, urbanization and technology in the geography taught in Zambia and the justification was that climate change and other topics are not just academic concepts, they are pressing issues that affect peoples' lives and livelihood the all over the world. Geography education would become directly relevant to students' everyday concerns and experiences.

The findings from participants interviewed echoed the assertion that learning about the causes, impacts and solutions to contemporary issues students would be empowered to become informed citizens and agents of change. Geography education would equip students with the knowledge, skill and critical thinking abilities needed to address societal challenges and contribute to positive outcomes. Strengthening geography education in areas such as climate change, urbanization and technology would enable students are equipped with awareness and skills needed to thrive in the 21st century.

Hill and Solem (1999) argued that geography education if incorporated with topics such as GIS and other contemporary technologies would provide a unique lens through which to understand issues from a spatial perspective and gain deeper appreciation for the interconnectedness and develop a global perspective on the contemporary challenges by examining the distribution, patterns and interactions of phenomenon across different scales and regions. This is in line with Bednarz (2006) argues that incorporating contemporary topics in geography education such as GIS and climate change can enhance critical thinking, problem solving and spatial reasoning skills.

Furthermore, Kent (2018) emphasizes the importance of incorporating contemporary topics in geography education to foster critical thinking, problem solving skills, civic engagement and global awareness. Solem et al (2011) also emphasizes the importance of incorporating sustainability and environmental topics in geography education would play a vital role in shaping informed and responsible citizens who are prepared to contribute to sustainable and equitable future. More so, Phiri (2011) analyzed sustainable development and environmental education in

Zambia emphasizing the importance of critical thinking and problem-solving skills. Simukanga (2013) discussed climate change and sustainable development in Zambia emphasizing the importance of critical thinking and problem-solving skills.

6.5. Geography topics to be excluded in the Curriculum

In as much the geography topics were concerned proposed geography topic to be excluded in the curriculum those that do not give learners a skill and are not practical. The topics to be excluded from the syllabus were climatic regions, the world is evolving and things keep on changing. What used to be rain forests yesterday may not be the same today because with new developments, most of the rain forests are long gone and in class the same information which was gotten years back has kept on being taught to learners. Topics such as earth movement faulting and folding were seen to be less relevant in helping learners earn a skill. The topics are so abstract that even teachers face challenges in explaining them to learners.

The findings were that some topics provide fundamental knowledge that is essential for providing understanding to more advanced concepts for example to understand volcanism you need the knowledge of layers of the earth, therefore, the structure of the earth. But with gaps in the syllabi it becomes difficult for learners to see the connectedness of the knowledge being conveyed to them.

Some geographical topics may become less relevant due to changes in the environment, society and technology. For instance, outdated geographical data or theories mat no longer accurately represent the current conditions, leading to the need to update the curriculum with more relevant content. For instance, subsistence farmers who used to practice chitemene or shifting cultivation today some are using chemical fertilizer to grow maize and not ashes from trees. They are no longer shifting cultivators but settled cultivators. It is important to allow teachers to think about geography education and the future and to foster their curriculum-making competences. Benether et al.'s (2015) study highlights that GIS and self-directed learning skills in geography education can enhance students' spatial thinking skills, problem solving abilities and self-directed skills in their learning. He emphasizes the importance of practical, hands on activities in geography education in line with Mundende's (2007) study.

The CIPP theory developed by Stufflebeam and Shrinkfield (2007) is an evaluative framework that was applied to support the need for evaluating senior secondary geography topics that would address contemporary societal needs.

Context; Identified the contemporary societal needs and issues relevant to geography education, such as climate change, sustainability, and environmental degradation. This stage analyzed the context in which geography education takes place.

Input determined the resources expertise and support needed to incorporate contemporary societal needs into geography topics, this included curriculum review, updated curriculum materials and access to technology.

Process, designed and implemented the incorporation of contemporary societal needs in geography topics. This is may involve revising the curriculum, developing new teaching methods, and providing opportunities for students to engage with real-world students to engage with real-world issues and case studies.

Product, evaluates the outcomes and impact of incorporating contemporary societal needs into geography topics, ultimately enhancing the relevance, effectiveness, and impact of geography education. By applying CIPP theory, educators and policy makers might systematically plan, implement and evaluate the senior secondary school geography topics in addressing contemporary societal needs, ultimately enhancing the relevance, effectiveness and the impact of geography education.

6.6. Framework for geography curriculum that contextually fit it with socio-environmental needs.

Geography was one of the subjects prescribed by curriculum development centers (CDC) on behalf of the Zambian government to be taught in schools. The geography curriculum was designed in such a way that it portrayed an important role in the preparation of a learner for future endeavors and execution of projects for economic development of the nation. The dynamism of the subject has enabled it to undergo several changes according to the needs of society (Carmody,2004). This was in line with the CIPP theory which evaluates the content given to the society if it is worthwhile and reviews the product (Stufflebeam & Shrinkfield, 2007). In evaluating the relevance of senior secondary school geography topics most of the participants were of the view that geography should

start from known to unknown to make it more interesting to both the teacher and the learner. The aim of the geography curriculum was designed to create the type of learner that can identify and solve problems, make decisions using critical and creative thinking, to be able to work effectively as an individual to collect, analyze and interpret information as well as sustain a commitment towards society sustainability (Uitto & Solaranta, 2016). This however, is consistent with the Zambia Education Curriculum Framework (2013), "It is envisaged that the curriculum will equip learners at all levels of education with vital knowledge, skills, positive attitudes and values that are necessary for contributing to the achievement of the Vision 2030".

The Zambian secondary school geography curriculum does not have much content on contemporary issues facing Zambian communities such as Waste Management, floods, Drought, Pollution, Environmental Management, Climate Change and education for sustainable development.

The analysis of the document showed that there were some topics in the senior secondary geography syllabus that needs to be worked on, those topics would be better covered at once than considering them separately. The syllabus is outlined as follows: **Grade 10 syllabus covers nine (9) topics namely**; Map work, Solar system, Earth movement, Weathering and Mass wasting, River processes, weather and climate, vegetation and natural environmental hazards (CDC,2013). **Grade 11 work only has three (3) topics to cover;** farming, fuel and energy and world population and **Grade 12 work covers eleven (11) topics these include;** Agriculture, Forestry, Wildlife and Tourism, Mining in Zambia, Mining in the sub region, power and energy in Zambia and power and energy in the Sub Region, Transport and communication in Zambia and Transport and communication in the Sub Region, Processing and manufacturing industries in Zambia and Processing and manufacturing industries in the sub region (CDC, 2013).

The findings on the topics contained the geography syllabi revealed that, although geography curriculum avoided repetitions as much as possible, there was a few contents on some topics that needed to be worked on such as farming in the world which is covered in grade 11 and Agriculture in grade 12. Agriculture in Zambia and farming in the world could be merged and taught under one topic Agriculture or Farming to reduce on the bulkiness of the contents in geography. It would be best if farming on the global scale taught in grade eleven (11) was merged with Agriculture in Zambia covered in grade twelve (12).

The Zambian geography syllabi was said to have been revised to cover Zambia and the Sub-region although grade 11 work typically consists of global topics. All 3 topics in grade 11 can be eliminated or merged to similar topics in grade 12 and since there is enough time to learn in grade 11, it would be better to cover more topics in grade 11 than in grade12.

On Grade 10 topics, the findings were that weather and climate, covers climatic regions of the world which should be enhanced in such a way that instead of teaching Vegetation of natural regions separately from climate characteristics it should be taught once and for all for instance when a teacher teaches the climatic characteristics of Equatorial he/she should also cover the vegetation of the Equatorial than repeating the same topics that was done when another topic begins on vegetation.

Further, the findings were that**,** Natural Environmental Hazards should be enhanced to cover hazards and disasters common to Zambia such as drought, floods and bush fires. The topic is not taken into consideration seriously as it covers hazards and disasters not common to Zambia. This is in line with Mubita's (2011) study, that lecturers and students did not take seriously the worthiness and appropriateness of the topics on environmental hazards and disasters. Other topics such as mass movement and wasting, Earthquakes, volcanism as well as faulting and folding all of these need a background of the Structure of the Earth which is not in the syllabus to be understood fully by learners.

It was discussed that it would be better to enhance Agriculture topic in grade 12 and eliminate farming in grade eleven and some of its contents added to grade 12 topics. World population a topic in grade 11 should also be eliminated and contents brought down to Zambian setting under Population in Zambia and the Sub-region. Fuel and Energy should be brought under grade 12 topic Power and Energy in Zambia and the sub-region, so that it is taught once because teaching it twice sounds repetitive.

Topics to be included in the syllabi according to the findings were; Settlement and population studies, which comes on section C of geography paper two to align national examinations with what is contained in the syllabus. It was suggested that it should come as a topic and be taught as such so that there is no mismatch between contents of the syllabus and questions presented in the exams.

Besides that, population in Zambia and settlement patterns is not in the syllabus and relying on the information that learners acquired at junior level was not good enough as they easily forget. Just like mining, wildlife and tourism and farming were repeated, it was suggested that fishing could also be repeated. Fishing in Zambia should be enhanced from where it ends in grade 9, since grade 9 work end on processing of fish, the senior level can include pond making, stocking, feeding and harvesting of fish. Fish farming is of economic value to the nation and can earn learners a life skill and making geography more practical than theoretical this is in line with the ministry of education nation policy on education (1996).

Structure of the Earth is another topic that was found necessary to be included in the geography syllabi because it is the foundation for natural environmental hazards, faulting and folding, earth quakes, mass movement and mass wasting and volcanism. Without the knowledge of earth structure learners cannot understand other topics relating to the earth. Moreover, the findings were that Environmental education should also be included in the syllabi because geography covers man's interaction with the environment and if environmental education would be included learners would understand their environment and take care of it by managing waste, not littering and polluting it.

According to Mundende (2011)**,** Geography field project was re-introduced to make geography subject more practical than theoretical. should also be included in the syllabi and be enhanced, instead of only writing a proposal in grade 10 a practical can be done such as farming using traditional and conversional methods of growing crops. Other types of farming can also be included such as poultry farming, Bee keeping. Fish farming etc.

The education system should be revised in such a way that it earns a learner a long-life skill. Empowering learners with skills to offer solutions to some of the challenges affecting man's interaction with the environment. Based on the review of geography syllabus, it is argued that in the light of the current content, the Zambian geography curriculum should be improved based on advancement in technology. Though not included in the curriculum, contemporary issues affect every society and curriculum should be designed to solve problems that society faces.

6.7. Syllabus improvement

Most of the participants about 16 out of 24 suggested that the topics in the senior secondary school Geography syllabus should be improved, strengthened, enhanced and organized logically in the manner that will make them more intelligible to each other in order not to sound repetitive because there were some lapses in the manner some topics were arranged in the syllabus. It was alleged that there are some topics that can be taught together as one topic and therefore, there was need to improve the senior secondary syllabus. With the coming up of green growth in Zambia, there was need to include conservation Agriculture, organic farming and agroforestry in the geography syllabus in order to meet the current needs of society.

6.8. Identification of geography topics that maybe less relevant to societal needs

On identifying topics that might be considered irrelevant to societal needs participants said it depended on various factors that included context, cultural norms, and the evolving challenges facing society. The current challenges as stated by participants were deforestation due to fuel wood production (charcoal and fire wood), which many households depended on. However, some topics in geography education were perceived as less directly relevant to addressing pressing societal needs. Most of the participants explained on some traditional geographical concepts or theories that have limited practical application or relevance in addressing contemporary societal challenges were viewed as less essential.

The CIPP model guided this study's evaluation of the relevance of senior secondary geography curriculum 2013 in addressing the needs of society. The context of the curriculum review highlighted the need for modernization of the geography topics and the theory used was necessary for the study because it helped in obtaining information pertaining to the quality and relevance of the senior secondary school geography topics in addressing societal needs and also provided useful information for making decisions on how best to improve learner skill acquisition and inclusion of relevant topics to align the curriculum with contemporary pressing issues. context evaluation was used to understand the rationale for determining the relevance of geography content that would lead to evaluation of topics in the senior secondary geography curriculum and topics to be included and excluded.

Further, this evaluation matched well with the theory CIPP, input evaluation, was used to devise a program strategy that would be environmentally, economically, socially, politically and

technologically secured, thus, it assessed the current curriculum and propose topics that are receptiveness to needs of society and their feasibility to learner skill acquisition (Stufflebeam & Shrinkfield 2007). Senior secondary school geography syllabus was proposed to be transformed from the 'ubiquitous and less relevant content of memorization to more focused, skillful, purposeful and resource-based content.

The CIPP evaluation model was very important in this study because the model and the study's framework share similarities but they serve different purposes and have distinct focuses. This study's framework was designed to improve the geography education syllabus, while the CIPP model is a general evaluation framework and applicable to various field, contexts and has a broader scope, encompassing various programs, projects and institutions.

Conversely, while the CIPP model is widely used and respected evaluation framework, it has some limitations and weaknesses. The CIPP model's focus on context might lead to an overemphasis on external factors, potentially overlooking some internal dynamics. Identifying the relevant context and setting boundaries for the evaluation can be challenging. The CIPP model linear structure (context, input, process and product) might not accurately reflect the complexities and interdependencies of real-world programs. The model does not explicitly address the sustainability of the program outcomes and impacts.

In summary, while this study's framework and the CIPP model share some similarities, they differ significantly in terms of purpose, scope, structure and methodology. The study's framework is a specialized approach for improving geography education whereas the CIPP model is a more general evaluation framework. Despite the weaknesses, the CIPP model remains a valuable and widely used evaluation framework.

Implications: The study's findings have significant implications for geography education. To enhance the relevance and effectiveness of senior secondary geography educators, policy makers and curriculum developers (CDC) must;

- Revise and update existing topics to reflect contemporary issues and challenges.
- Integrate emerging themes and technologies to equip students with 21st century skills.
- Streamline the curriculum to eliminate outdated content and prioritize essential learning outcomes.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS

7.1. Overview

The previous chapter presented interpretations and analysis of findings of the study. The final chapter is an attempt to show that the research questions raised in chapter one have been answered and had further led to the conclusion and recommendations based on the findings. The researcher tries to show the gap that was identified in literature review has been filled. The main purpose of the study was to evaluate the relevance of the senior secondary school geography topics and determine their effectiveness in addressing modern societal challenges. The findings suggest that the current curriculum requires significant revisions to effectively prepare students for the complexities of the 21st century. More so, recommendations and areas of for future research have been presented considering the fact that some of the findings may require further research.

7.2. CONCLUSION

The main problem identified in this study was that certain senior secondary school geography topics such as weather and climate, fuel and energy, power and energy, Agriculture, farming, and climatic regions require strengthening to enhance depth and relevance. Besides that, map work and basic map reading techniques make geography more practical and retaining such topics ensures that students receive well-rounded education that prepares them for future academic and professional pursuits while fostering a broader understanding of the world.

New topics, including climate change mitigation, alternative sources of energy, Sustainable development, geographic information systems (GIS), environmental education, urbanization, globalization are not just academic concepts but they are pressing issues that affect people's lives and livelihood worldwide, focusing on such topics geography becomes directly relevant to student's everyday experiences and concerns. Such topics need to be incorporated to address pressing modern societal challenges and make geography more relevant and responsive to modern challenges.

Conversely, topics such as outdated geographical descriptions, irrelevant historical contexts or theories may no longer accurately represent current conditions, leading to the need to update

curriculum with more relevant content, such topics should be removed or revised to ensure the curriculum remain focused on essential knowledge and skills.

Implications

The study's findings have significant implications for geography education. To enhance the relevance and effectiveness of senior secondary geography educators, policy makers and curriculum developers must;

- Revise and update existing topics to reflect contemporary issues and challenges.
- Integrate emerging themes and technologies to equip students with 21st century skills.
- Streamline the curriculum to eliminate outdated content and prioritize essential learning outcomes.

7.3. Recommendations

The geography is a very interesting and mind capturing subject that addresses societal challenges because it deals with man and his environment. The purpose of the study was to evaluate the relevance of the senior secondary school geography topics and determine their effectiveness in addressing modern societal challenges. This study, however, builds upon prior knowledge and provide a bridge for further studies that may be able to bring out insights on geography topics that maybe relevant in addressing contemporary societal needs. In view of the findings and conclusion of this study, the following recommendations were established:

A. Recommendations

i. Based on the study's findings it is recommended to integrate contemporary issues into new senior secondary school Geography curricula.

ii. Based on this study's findings on topics that are less relevant to societal needs, it is recommended to review and revise the senior secondary school geography curriculum by CDC to reflect contemporary issues and challenges.

iii. This study's findings on contemporary topics to be included in the curriculum recommend that CDC should streamline the curriculum to eliminate outdated content and prioritize essential learning outcomes.

iv. Provide continuing professional development (CPD) for teachers to update their knowledge, understanding and skills of a subject area.

v. Encourage competence-based learning, problem solving and critical thinking approaches.

Recommendations for Future Research

i. Investigate effective teaching methods for incorporating modern societal challenges into geography education.
ii. Develop and evaluate innovative curriculum resources and materials
iii. Assess the impact of revised geography curricula on student outcomes and social engagement.

In conclusion, this study underscores the need for a refreshed and revitalized senior secondary school geography curriculum. By strengthening, enhancing, adding and refining topics, educators can empower students with the knowledge, skills and critical thinking necessary to address the complex challenges facing the world today.

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SERIES OF APPENDICES

The following appendices provide supplementary materials that support the research study. These appendices provide additional context and transparency to the research study, allowing readers to access detailed information about the research methodology and procedures. Appendices range from A to G. Appendix A, includes a detailed breakdown of the research expenses, including costs associated with data collection, participants' compensations and research assistant fees.

APENDIX A: BUDGET FOR THE RESERCH DISSERTATION ON EVALUATION OF THE RELEVANCE SENIOR SECONDARY GEOGRAPHY TOPICS IN ADDRESSING CONTEMPORARY SOCIETAL NEEDS IN KASAMA DISTRICT, NORTHERN PROVINCE ZAMBIA.

Budget Category	**Amount(ZMK)**
Personal Costs	K1000
RESEARCH EXPENSES	**K7,250**
Data Collection Tools	K 500
Printing and Photocopying **Spiral bounding** **Case bounding for hardcover dissertations**	K3000 K250 K3500
TRAVEL AND FIELDWORK	**K6,700**
Domestic Travels within Kasama **Travels to Lusaka and from Kasama**	K500 K5,000
Fieldwork Expenses	K500
Participant Recruitment	K200
Participant Incentives	K500
PUBLICATION AND DISSEMINATION	K10 000
Publication Fees **Conference Registration**	K2 500 K2500
Contingency Fund	K500
Total	**K29,450**

APPENDIX B: RESEARCH SCHEDULE AND TIMELINE 2023/24

ID	Task name	Start	Finish	Duration	YEAR-2023/2024
					July | Aug | Sept | Oct | Nov | Dec | Jan 2024
					w w w w w w w w w w w w w w w w w w w w w w w w
1	Proposal Corrections	26/06/23	07/07/23	2 weeks	
2	Ethical clearance	10/07/23	10/08/23	1 Month	
3	Data collection	20/08/23	20/09/23	1 month	
4	Data Analysis	21/09/23	21/11/23	1 month	
5	Presentation of Findings	20/11/23	20/11/23	1 day	
7	Corrections of findings	22/11/23	27/11/23	1 week	
8	Examination/ corrections	20/11/23	15/12/23	3 weeks	
9	Report writing and submission of Dissertation	16/12/23	15/02/24	2 months	

APPENDICES C, D & E: UNSTRUCTURED INTERVIEWS:

These appendices contain the semi-structured interview guides used to collect data from teachers, lecturers and key informants.

APPENDIX C: INTERVIEWS FOR TEACHERS ON EVALUATION OF SENIOR SECONDARY SCHOOL GEOGRAPHY TOPICS IN ADDRESSING CONTEMPORARY SOCIETAL NEEDS IN KASAMA DISTRICT.

Introduction: Good morning /afternoon.

My name is Langi Cecilia.

I am a student at the University of Zambia pursuing a Master's of Education in Geography Education degree. I am conducting a study titled: evaluation of senior secondary school geography topics in addressing contemporary societal needs in Kasama District, Zambia. The study is significant to the Education sector as it will contribute to enhancing quality education and aims to identify potential gaps and opportunities for improvement in the geography curriculum to better meet the evolving demands of contemporary Zambian society.

You are invited to participate in the study because you are the subject implementer and at the grassroots. The information collected will be used solely for academic purpose only and the researcher will keep such information strictly confidential. I assure you that the study will be conducted in compliance with all ethical guidelines and regulations. Before we begin, please provide consent for recording this interview for accuracy purposes.

Thank you for participating in this survey.

SECTION A: BIO-DATA

SEX: male: ☐ Female: ☐

Age: **20- 34** ☐ **35-44** ☐ **45-54** ☐ **55- 64** ☐ **65 +** ☐

Level of education: Diploma ☐ **Degree** ☐ **Masters** ☐ **PHD** ☐

SECTION B: Geography Topics Relevant to societal needs

Question1. a. In your opinion, do the current geography topics in the senior secondary curriculum adequately address the needs of society, in Kasama District?

b. If yes, please explain……

c. If no give reasons please……

Question2. a. Are there any specific geography topics that you believe are particularly relevant or irrelevant to students' lives and current needs of Kasama community?

b. Would you specifically mention such topics……

c. why do you think those topics mentioned are relevant or irrelevant?.....

d. Considering the challenges and opportunities that Kasama faces today, how well does the geography curriculum align to addressing these issues?.....

……

SECTION C: Geography topics not relevant to societal needs

Question. 3. How do you identify topics that may have become irrelevant to society over time in the syllabus?

Question 4: Are you often updated when topics considered irrelevant are removed from the curriculum?

SECTION D: Geography topics to be included or excluded in the syllabus

Question 5. Are there any emerging or pressing societal needs that you believe should be included in the geography curriculum at the senior secondary level?.....

b. what topics do you think should be included or excluded in the curriculum?.....

c. why should they be excluded or included?.....

End of interview thank you for your time.

Thank you for your time and for sharing your valuable perspectives.

APPENDIX D: INTERVIEW GUIDE FOR CDC OFFICIAL ON EVALUATION OF RELEVANCE OF SENIOR SECONDARY SCHOOL GEOGRAPHY TOPICS IN ADDRESSING CONTEMPORARY SOCIETAL NEEDS IN KASAMA DISTRICT.

Introduction: My name is Langi Cecilia.

I am a student at the University of Zambia pursuing a Master's of Education in Geography Education degree. I am conducting a study titled: evaluation of the relevance of senior secondary school geography topics in addressing contemporary societal needs in Kasama District, Zambia.

Thank you for agreeing to participate in this interview to discuss the evaluation of Senior Secondary School Geography topics in the Zambian context, particularly focusing on the selection of relevant and irrelevant topics to address modern challenges facing society. The information gathered from this interview will help us understand your perspectives as a curriculum developer and contribute to enhancing the geography curriculum. The interview will last approximately 20-30 minutes. Before we begin, please provide consent for recording this interview for accuracy purposes.

Section 1: Background and Experience

A. Can you please introduce yourself and describe your role as a curriculum developer in the context of Geography education in Zambia?
B. How long have you been involved in curriculum development for Senior Secondary School Geography topics in Zambia?

Section 2: Evaluation of Current Geography Curriculum

1. How do you assess the effectiveness of the current Senior Secondary School Geography curriculum in addressing modern challenges facing Zambian society?

2. What criteria do you use to evaluate the relevance of topics to be included or excluded in the curriculum?
3. How do you determine which topics are relevant and which ones are irrelevant to the needs of Zambian society?

Section 3: Selection of Relevant Topics

4. When selecting topics for the curriculum, what methods do you use to identify the most relevant and pressing issues to be addressed?
5. How do you involve stakeholders (such as teachers, students, and community members) in the selection process to ensure inclusivity and relevance?

Section 4: Addressing Irrelevant Topics

6. How do you identify topics that may have become irrelevant or less critical to Zambian society over time?

   b. would you cite examples of topics that are relevant and irrelevant one in addressing modern societal needs?

   c. Do you intend to improve the geography curriculum in future to contextually fit the needs of the Zambian society?

Section 5: Conclusion

7. Are there any additional insights or recommendations you would like to share regarding senior secondary geography curriculum development and addressing modern challenges in the Zambian context?

Thank you for your time and willingness to share your valuable perspectives.

APPENDIX E: INTERVIEW GUIDE FOR E.C.Z. OFFICIAL ON EVALUATION OF THE SENIOR SECONDARY SCHOOL GEOGRAPHY TOPICS IN ADDRESSING CONTEMPORARY SOCIETAL NEEDS IN KASAMA DISTRICT.

Good morning/ afternoon,

Introduction: My name is Langi Cecilia.

I am a student at the University of Zambia pursuing a Master's of Education in Geography Education degree. I am conducting a study titled: evaluation of the relevance of senior secondary school geography topics in addressing contemporary societal needs in Kasama District, Zambia.

Thank you for participating in this interview. As the Examination Council of Zambia (ECZ), your role in shaping the senior secondary geography syllabus and examination content is crucial. I would like to gain insights into the process of determining the relevance of topics examined and the reasons behind the removal of certain topics from the syllabus. Your feedback will help us understand how the syllabus aligns with contemporary societal needs and ensure that geography education remains relevant to the students in Zambia. The interview will be approximately 30 -40 minutes long, and all responses will be treated with confidentiality. Before we begin, please provide consent for recording this interview for accuracy purposes.

Section 1: Relevance of Topics Examined

1. How does the Examination Council of Zambia determine the relevance of topics to be examined in the senior secondary geography syllabus?
2. What measures does the ECZ take to ensure that the examination content reflects the most pressing geographical issues faced by the country?
3. Are there any specific mechanisms in place to regularly review and update the examination content to keep it relevant in response to changing societal needs? If so, how often is this done?

Section 2: Removal of Topics from the Syllabus

4. What criteria do the ECZ use to determine what topics should be not be examined from the senior secondary geography syllabus?
5. Have there been recent instances where topics were removed from the syllabus due to being considered less relevant or outdated? Could you share some examples of such topics and the reasons behind their removal?

   b. are there instances where topics are not in the syllabus but examined? If yes, explain the reason behind that?
6. When topics are removed from the syllabus, how does the ECZ ensure that the changes are communicated effectively to schools, teachers, and students to avoid any confusion or gaps in the teaching and learning process?
7. How does the Examination Council of Zambia address concerns raised by educators or subject matter experts regarding the removal of certain topics? Is there a process for reviewing and reconsidering these decisions?

Conclusion: Thank you for your valuable insights into the relevance of topics examined and the process of including and removing topics from the senior secondary geography syllabus. Your feedback will contribute to enhancing the quality and appropriateness of geography education in Zambia. If there are any additional points or suggestions you would like to share, please feel free to do so. I genuinely appreciate your time and expertise in participating in this interview.

APPENDIX F: INTERVIEW GUIDE FOR UNIVERSITY AND COLLEGE LECTURERS ON EVALUATION OF THE RELEVANCE SENIOR SECONDARY SCHOOL GEOGRAPHY TOPICS IN ADDRESSING CONTEMPORARY SOCIETAL NEEDS IN KASAMA DISTRICT.

Good morning/ afternoon,

Introduction: My name is Langi Cecilia.

I am a student at the University of Zambia pursuing a Master's of Education in Geography Education degree. I am conducting a study titled: evaluation of the relevance of senior secondary school geography topics in addressing contemporary societal needs in Kasama District, Zambia.

Thank you for accepting to participate in the interview besides your busy schedule. Your response as a lecturer can provide valuable insights for further improvements of the geography curriculum. Your feedback will be instrumental in shaping the future of geography education in the country. Before we begin, please provide consent for recording this interview for accuracy purposes.

1. As a geography lecturer, how do you personally stay updated with the latest developments and trends to ensure that your teachings are in line with modern societal needs and challenges in Zambia?

2. Are there any topics within senior secondary school geography that you believe are outdated or no longer applicable to the current societal needs in Zambia? If yes, which topics and why?

3. How well do you think senior secondary school geography topics prepare learners to understand and address the socio-environmental issues facing Zambia? Are there any gaps or areas that need improvement?

4. In your view, what are the key knowledge and skills that senior secondary school geography should emphasize to better equip learners for the contemporary challenges in Zambia?

5. Can you provide examples of specific senior secondary geography topics you've incorporated into your curriculum that directly relate to the current issues faced by the local community in the country?

6. In your experience, have you noticed any changes in the relevance of certain geography topics over time, given the evolving needs of society? How do you adapt your teaching accordingly?
7. Given the changing environmental and socio-economic landscape in Zambia, what adjustments do you propose in the geography curriculum to ensure it remains up-to-date and valuable to the students and the country's development?

Conclusion: Thank you for the information given to me.

APPENDIX G: FOCUS GROUP DISCUSSION GUIDE:

This appendix include focus group discussion guide used to collect data from students. The guide outlines the research questions, topics and activities used to facilitate group discussions and explore the research objectives

APPENDIX G: FOCUS GROUP DISCUSSION GUIDE: FOR STUDENTS ON EVALUATION OF THE RELEVANCE OF SENIOR SECONDARY SCHOOL GEOGRAPHY TOPICS IN ADDRESSING CONTEMPORARY SOCIETAL NEEDS IN KASAMA DISTRICT.

Introduction: My name is Langi Cecilia.

I am a student at the University of Zambia pursuing a Master's of Education in Geography Education degree. I am conducting a study titled: evaluation of senior secondary school geography topics in addressing contemporary societal needs in Kasama District, Zambia.

Thank you for accepting to participate the discussion your contribution is very valuable and will be kept confidential. This research is purely for academic purposes. The findings of this study have the potential to contribute to the improvement of geography education and curriculum development in Zambia, ultimately benefitting the education system and society of Kasama as a whole. Before we begin, please provide consent for recording this interview for accuracy purposes.

1. How would you describe your experience with geography topics in senior secondary school?
2. How often do you encounter or use geographical knowledge in your daily life or future aspirations?

Relevance of Geography Topics:

3. Looking back on your senior secondary school geography curriculum, which topics do you think were most relevant or irrelevant to understanding modern societal needs in Zambia? Explain why?
4. Are there any geography topics you found particularly lacking in relevance to contemporary issues and challenges in Kasama District? Please explain.

Application of Geography Knowledge:

5. . Have you ever utilized geographic knowledge or skills to address real-world issues in Kasama District? If so, could you provide an example?
6. How can the inclusion of local knowledge and other topics enhance learners' understanding of geography and its relevance to their lives in Kasama District?

Conclusion: Based on our discussion, what do you think are the most important changes or additions that should be made to the senior secondary school geography curriculum to better meet contemporary societal needs not only in Kasama District but the nation as a whole?

Thank you for your participation in the discussions and for all your valuable contributions.