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ASSESSING THE EFFECT OF CLIMATE CHANGE ON SECONDARY SCHOOL ISLAMIC STUDIES CURRICULUM IMPLEMENTATION IN KWARA STATE

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Abstract

This study assessed effect of climate change on secondary school Islamic Studies curriculum implementation in Kwara State. This study adopted descriptive survey design. The population for this study was all secondary school teachers in Kwara State. Muti-stage sampling technique was adopted in the study. Out of 90 respondents proposed to use in the study only 78 (70.2%) were available. An adapted questionnaire from Sergio et al. (2024) titled: Effects of Climate Change on Secondary School Islamic Studies Curriculum Implementation (ECCSSISCI) was used in this study. Descriptive statistical tools used in the study were percentage, mean and standard deviation while inferential statistical tool adopted was t-test. The findings of this study revealed that revealed that population of male teachers taking Islamic Studies at secondary schools in Kwara State is higher than females. Similarly, the study showed that the effect of climate change on secondary school Islamic Studies curriculum implementation in Kwara State is moderate with average mean score of 2.64. Furthermore, the study indicated that there is significant difference in the effect of climate change on secondary school Islamic Studies curriculum implementation in Kwara State based on gender and school location. The study therefore, concluded that climate change generates certain circumstances that affect proper implementation of secondary school Islamic Studies curriculum in Kwara State, Nigeria. The study recommended that Teaching Service Commission in the state should train Islamic Studies teachers on how to manage every circumstance including climate change.

Key words: Climate Change, Assessment, Islamic Studies Curriculum, Awareness, gender, school location, Islamic Studies teachers.

Introduction

Islam is a religion that encourages not only application of moderation in the utilization and management of natural resources but also teaches Muslims the proper way of showing compliance and obedience to the rules and regulations of managing God-giving resources. Al-Quran that is globally considered as an everlasting miracle sent down to Prophet Muhammad (pbuh) had already discussed clearly more than twenty decades to this time supernatural issues surrounding natural phenomenon and resources such as

Sun, Moon, Stars, Rain, Wind, Snow, Cloud formation, landslide, Mountain, day and night alternation, crude oil, sea, river, gold, silver and many others (Afroz, 2020). For instance, Allah says:

“Behold! In the creation of the heavens and the earth; in the alternation of the Night and the Day; in the sailing of the ships through the ocean for the profit of mankind; in the rain which God sends down from the skies and the life which He gives therewith to an earth that is dead; in the beast of all kinds that He scatters through the earth; in the change of the winds and the clouds which they like their slaves between the sky and the earth; (Here) indeed are signs for a people that are wise. (2:164)”

Islamic Studies is an academic discipline that is based on the teachings of Islam sourced from Al-Quran, Hadith and other sources of Islamic teachings. Climate change is one of the crucial aspects that occupied large portions of discussion in the Glorious Quran. The environmental condition, atmospheric situation, formation of water vapour, wind wave and erosion, among others, heat, burning of fossil fuel, and all those byproducts of climate change are some of the factors that have been widely discussed and elaborated by Islamic scholars. However, Muslims' perception of climate change differs in terms of its causes and effects. To this end, according to Reem (2021), Islam teaches Muslims to practice balance and justice in the use of natural resources without wasting them unnecessarily, as this may lead to unforeseen problem sooner or soonest.

According to Amanchukwu et al. (2015), the term climate is defined as the average weather pattern of any given place which includes; patterns of temperature precipitation (snow or rain), humidity, wind, and seasons. It was further noticed by Amanchukwu et al. (2015) that the climate patterns do play a very significant role in determining the natural ecosystems, human economies, and cultural systems of a place. This fact is noticed and therefore confirmed that the climate system is rapidly changing with some disruptive effects on education in Nigeria. It is evident from the fore going that climate effects are really seriously affecting the proper implementation of educational curriculum in Nigeria.

Moreover, the problem of climate change is picking up speed all over the world because of its impact on development. Climate change, as noted by Owede (2020), is the long-term prevailing weather condition of a region at the time of year. Ekpoh and Ekpoh (2011) defined it as an abnormal variation in Earth's weather conditions, occurring periodically and resulting from either nature or human actions. Ekpoh (2009) described climate change as a long-term change in global weather systems. Francis (2014) described climate change as changing weather patterns over the Earth's surface with time, either due to inherent variability or as a result of human activities. Marin et al. further (2024) defined climate change as the global warming of the planet that is perpetually induced by human activities—for example, burning fossil fuels such as oil and coal, setting fires to bushes, deforestation, and other actions. In this respect, climate change is the long-term variation in irregularity of temperature and weather patterns, which is attributed to human activities on the planet. Reem (2021) claimed that Islam has greatly prohibited cutting down trees in the bush and has instead introduced tree planting as an important measure to hold the earth and militate against destructive damages. This indicated how the mismanagement of natural resources on the planet leads to unexpected weather reactions.

Owede (2020) in his research said that temperature, air pressure, humidity, precipitation, sunshine, cloudiness and winds will keep changing unfavorably. Ekpoh and Ekpoh (2011) disclosed that the world warming condition has over the years been associated with far more than the necessary amount of carbon

dioxide, greenhouse gases in the atmosphere, bush burning and others, among which normally lead to repeated droughts, excessive heat waves, windstorms, uncontrolled flooding, and a myriad of others. Odey (2009) also posited that climate change has very adverse effects such as dissatisfaction, sea-level rise, increased flooding, salinization of water, drought, landslides, among others. These will then culminate in food scarcity as well as infrastructural and social dislocations and health challenges, among others (Odey, 2009). It needs to be mentioned that Amanchukwu et al. The paper noted that overusing items and making more of them for people's success and health on the planet greatly leads to higher pressure on using up resources with the help of energy, mainly made by fossil fuels. This process lets out greenhouse gases into the air and leads to the disruption of some key ecological cycles, which in turn causes climate change.

However, wastes from industries produce CO and CO₂; accelerating the temperature of the earth and when there is an excess of CO and CO₂ in the air, it leads to a greenhouse effect, which traps sunlight from the entrance of the earth; eventually, the earth seems to be covered by CO and CO₂ and thus, the earth becomes very hot for the inhabitants to have enjoyment. The combined effect of the two gases' products will bring so many setbacks to the activities of man on the earth, including education. It is against this background that the present study evaluated the effect of climate change on the implementation of the Islamic Studies curriculum at the senior secondary school level in Kwara State. This study is thus aimed at filling this gap.

Purpose of the Study

The main purpose of this study was to assess effect of climate change on secondary school Islamic Studies curriculum implementation in Kwara State. Specifically, the study assessed:

- 1) The level of effects of climate change on secondary school Islamic Studies curriculum implementation in Kwara State.
- 2) The level of effects of climate change on secondary school Islamic Studies curriculum implementation based on teachers' gender
- 3) The level of effects of climate change on secondary school Islamic Studies curriculum implementation based on school location

Research Questions

- 1) The level of effects of climate change on secondary school Islamic Studies curriculum implementation in Kwara State?
- 2) Does the level of climate change have any effect on secondary school Islamic Studies curriculum implementation based on teachers' gender?
- 3) Does the level of climate change have any effect on secondary school Islamic Studies curriculum implementation based on school location?

Hypothesis

H01: there is no significant difference in the effect of climate change on secondary school Islamic Studies curriculum implementation based on teachers' gender

H02: there is no significant difference in the effect of climate change on secondary school Islamic Studies curriculum implementation based on school location

Literature Review on the Effects of Climate Change on Senior Secondary School Islamic Studies Curriculum Implementation

Islam is a religion that states its believers should follow the orders given by God through Prophet Muhammad on the use of natural resources provided by God for the betterment of mankind on earth. God had ordered that humans should not mess up with the natural balance of the earth; no corruption should be created. "The creation of the heavens and the earth is far greater than the creation of mankind. But most of mankind do not know it" (Qur'an 40:56). The Lord draws attention to something very relevant in these verses, a fact that is not clear to most Muslims of the world. As Khalid (2002) notes, discussions in Islamic jurisprudence on regulations regarding the conservation and utilization of water resources have rules for acquiring land with a special arrangement of graded use; it has special rules for the establishment of rangelands, wetlands, and green belts and also wildlife protection and conservation. There are no such natural resources beneficiaries in the present day who do not, by their strategies, project the eventualities associated with the misuse and abuse of natural resources on the earth.

Moreover, according to the Glorious Qur'an, Muslims are told that Allah created the universe and its components for certain purposes; therefore, they are not supposed to trespass or use the universe and the components for illegal purposes. Also, He (Allah) taught Muslims that the laws of creation were also included in elements of order, balance, and proportion. For instance, Allah says:

"He created everything and determined it most exactly" (25:2)

In another chapter Allah says:

"It is He Who appointed the Sun to give radiance and the Moon to give light, assigning it in phases; in order that you (people) may be able to count years and do calculation; Allah did not create these things except with truth. We make the signs clear for people who know" (10:5).

In the same way, different resources are used by humans on the Earth; such as: plants, land, water, oxygen, air, coal, oil, and other natural resources. Rini, et al. (2017) stated that the food that humans eat comes from plants that grow on the land and water; oxygen is taken in by humans from the air, coal, oil and other natural materials are used to create energy to manage industries these industries manufacture materials that are useful for improving living standards and human well-being. It shows all natural resources that get used in industries in Nigeria have a bigger role with the waste product from the plants and human daily activities in contributing more to changes that go on in the Earth and lead to climate change.

Some of the devastating effects of climate change in Nigeria include intense thunderstorms, widespread floods, and incessant droughts (Ekpon & Ekpon, 2011). In the same vein, Odey (2009) opines that climate change is very dangerous because it is usually associated with a litany of destructive issues, among them desertification, sea-level rise, flooding, and water salination, to mention but a few. "The results of climate change that one sees in Nigeria are challenges of food security, destruction of infrastructure, and social dislocation that brings about the closure of the schools," noted Ekpon & Ekpon (2011).

The effects of climate change on the teaching and learning processes do not only involve the destruction of physical phenomena and infrastructures but also the widespreading of deadly diseases. Rising temperatures could cause some negative effects that include chronic heat rashes, Cerebra-Spinal Meningitis (CSM), stroke, malaria, and other related ones.

In addition, they remarked, "Climate change tends to have serious adversity on academic processes of the students in Nigeria." During heavy rain, according to the explanation of Ekpon and Ekpon, many

teachers and students will be absent from school, which will definitely affect the syllabus and other school activities. More people will be affected living in the villages because of the long trek that has to be made before they can get to schools; nobody is happy when there is serious drought and heavy rain because nobody loves to walk a long distance under heavy rain. Much care is needed when there is heavy rain as eventualities related to lives and properties can easily occur; erosions, over-controlled drought, washed away farm produces, among others are likely consequences of climate change that will naturally affect the school system.

Extreme weather, heavy rainfall, floods, abnormal temperatures, among others, are the by-products of climate change (Francis, 2014). According to Sergio (2024), it will be difficult for school administrators, teachers, and students to enjoy teaching and learning activities when the weather is not favorable. School activities are always disrupted by hot weather and heavy rainfall for many reasons from the teachers and students, and these will affect curriculum implementation in one way or another (Habler et al. 2024). Climate change effects on the education system in Nigeria are enormous. This is because when climate change occurs, it affects every individual, every sphere of our environment and natural resources, and thus almost every part of our lives, educational, economic, political, social, religious, and even urban and rural zoning. This means that the effects of climate change are very severe and can impact the school curriculum, which will eventually lead to distortions of the school calendar, syllabus, and all other school activities in Nigeria. According to Sagala et al. (2019), the environment is one vibrant variable that predicts climate change to affect curriculum implementation in most countries, including Indonesia. According to Tompodung et al. (2018), the newest crisis of climate change is not only from visible causes but other causes need to be incorporated as well, like waste issues, environmental pollution, and reforestation.

Islamic Studies is a subjects taught in the schools to inculcate moral and spiritual values in such a way that their dispositions towards life, actions, reactions, decision-making process, approval and disapproval of various bodies of knowledge become strictly guided and governed by the rules and regulations of Islam (Hussain, 2015). According to Suraju (2017), Islamic studies are taught in schools for giving the students basic knowledge and information regarding Islam and for making them morally, physically, politically, socially, and spiritually conscious individuals. As this composed the content of the Islamic Studies syllabus at the introduction of the 6-3-3-4 system of education, it was made up of three major composites: Hidayah, Fiqh, and Tarikh. And each composite in turn made up three compositions. The breakdown of the compositions are those under Hidayah or Guidance, which included Qur'an, Hadith, and Tahdhib. Fiqh contained Tawhid, Ibadah, and Mu'amalah. And Tarikh constituted the life history of Prophet Mohammed (S.A.W) and the leadership of four orthodox caliphs; the spread of Islam to West Africa; and the contribution of Muslims to the world's civilization (Ayuba, 2019).

To understand the Quran, basic knowledge in Arabic has to be primary, before one even contemplates memorizing it or understanding more knowledge that is directly or indirectly related to the Quran. "The Holy Quran is Allah's words and contains what He prohibits and permits. The manner in which the revelation, reasons, and compilation of the Quran took place, is some of the related basic knowledge in connection with the Holy Quran." Hadith, according to Ja'afaru, "is the record of the sayings, actions, and tacit approval or disapproval of Prophet Muhammad." He added that 'the Hadith elaborates on some of the precepts of the Holy Qur'an and supplements it in regard to matters about which the Holy Qur'an is silent.' Tawhid is knowledge about God Almighty, His Existence, His Power, His Singularity, and a host of

others. It includes knowledge that 'belief in the existence of Angels, Day of Judgment, and the Questioning, etc., constitute a part of that belief system.' Fiqh is concerned with acts of worship, such as Salat, Zakat, Sawm, and Hajj. Details of how each pillar of Islam mentioned above is to be performed, discussion on Taharah and its kinds, explanation on Nikah, Talaq, and the rest of them.

Methodology

This study adopted descriptive survey design. The population for this study was all senior secondary school teachers in Kwara State. The target population comprised all senior secondary school Islamic Studies teachers in Kwara State. Multi-stage technique was adopted in this study. Simple random sampling technique was used to select a Local Government Area from each three Senatorial Districts that form Kwara State. Furthermore, simple random sampling technique was used to select 10 public senior secondary schools from each Local Government Area. Therefore, 30 public secondary schools were sampled in the study. Purposive sampling technique was also used in the study to select 3 Islamic Studies teachers. Therefore, out of 90 Islamic Studies teachers proposed to sample from senior secondary schools in the study only 78 (70.2%) was available. Therefore, 66 (84.6%) of the total sampled respondents was male teachers of Islamic Studies while 12 (15.4%) of the total sampled respondents was female teachers of Islamic Studies in Kwara State. Equally, 65 (83.3%) represented total sample from urban public schools while 13 (16.7%) represented Islamic Studies teachers sampled from rural public schools in Kwara State.

Furthermore, an adapted questionnaire from Sergio et al. (2024) titled: Effects of Climate Change on Senior Secondary School Islamic Studies' Curriculum Implementation (ECCSSSISCI) was used in this study. The questionnaire contained 10 items and it was coded as Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

The instrument was validated by the experts and reliability was carried out using Cronbach Alpha and the reliability co-efficient was 0.76. Percentage was used to describe demographic data of the respondents in the study. Mean and Standard Deviation were used to answer the research question, while t-test was used to test all hypotheses at 0.05 level of significance.

Presentation of the Results

Table 1: showing demographic representation of the respondents

S/N	ITEMS	Frequency	Percentage
1	Islamic Studies teachers' Gender		
	Male	66	84.6
	Female	12	15.4
	Total	78	100.0
2	school location		
	Teachers from urban schools	65	83.3
	Teachers from rural schools	13	16.7
	Total	78	100.0

The table showed that 78 Islamic Studies teachers were sampled in this study in Kwara State. It was similarly discovered from the table that out of 78 teachers of Islamic Studies sampled from public secondary school in Kwara State 66 (84.6%) were males while 12 (15.4%) were females. This implied that the population of male Islamic Studies teachers is higher than female Islamic Studies teachers at public secondary schools in

Kwara State. Furthermore, it showed from the table that out of 78 Islamic Studies teachers sampled in this study 65 (83.3%) were from urban public secondary schools while 13 (16.7%) were from rural public secondary schools. This implied that the population of Islamic Studies teachers in urban public schools is higher than the population of Islamic Studies teachers in rural public secondary schools in Kwara State. This might be as a result of students' population in each area.

Research Question

Table 2: Does the level of climate change have any effect on secondary school Islamic Studies curriculum implementation in Kwara State?

S/N	ITEMS	X	SD	Remark
1	The increase in the temperature can make condition for teaching and learning of Islamic Studies uncomfortable	2.59	0.89	Moderate
2	The increase frequency of rain fall can affect Islamic Studies curriculum implementation in the schools	2.74	0.50	Moderate
3	The effect of abnormal weather conditions can hinder proper coverage of teaching and learning of Islamic Studies syllabus	2.63	0.90	Moderate
4	The incessant rainfall may make Islamic Studies syllabus coverage impossible in the schools	2.45	1.18	Moderate
5	Flooding is capable of altering the achievement of Islamic Studies instructional objectives	2.37	1.16	Moderate
6	Threats that hot weather condition pose on the teaching and learning exercise in the school are capable of bringing set back to Islamic Studies syllabus coverage	3.23	0.74	High
7	The strong wind has effect on Islamic Studies students' attendance in the school	2.91	0.97	Moderate
8	The shortage of food that is normally resulted from climate change may affect proper implementation of Islamic Studies curriculum	2.19	0.98	Moderate
9	Endemic diseases from unfriendly weather may lead to closure of schools which can affect Islamic programmes in the school	2.65	0.89	Moderate
10	The effect of socio-economic problems resulted from deadly weather may cause improper accomplishment of Islamic Studies instructional objectives	2.67	0.86	Moderate
Average Mean		2.64	Moderate	

Note: Mean scores clarification 1.00-1.99 Low, 2.00-2.99 Moderate & 3.00-4.00 High

The table 2 showed that the average mean score of 2.64 indicated that the effect of climate change on Islamic Studies curriculum in secondary schools in Kwara State is moderate. Although the effect of climate

change on curriculum implementation took different dimensions as it was discovered from the analysis, nevertheless the average mean score showed that the teachers are able to manage the situation.

Hypothesis Testing

H01: there is no significant difference in the effect of climate change on secondary school Islamic Studies curriculum implementation based on teachers' gender

Table 3: showing significant difference in the effect of climate change on secondary school Islamic Studies curriculum implementation based on teachers' gender

Variable	N	Mean	SD	df	t	sig.	Decision
Gender	78	1.15	0.36	77	28.06	0.000	rejected
Climate Change		26.44	5.43				

Source: Data output from SPSS (version 25th) (2024).

The table above displayed the analysis of the effect of climate change on secondary school Islamic Studies curriculum implementation based on gender with the aid of t-test statistical tool. From the analysis, it was discovered that calculated t-value was 28.06 with significant level of 0.000. Since significant level of 0.000 was less than 0.05, hypothesis one is thereby rejected and therefore there is significant difference in the effect of climate change on the implementation of secondary school Islamic Studies curriculum in Kwara State based on gender. This implies that implementation of the curriculum is manageable and smooth by some teachers in Kwara State while hard and tough for others. This assumption might be true because in some locations in the state the nature of weather is highly sympathetic.

H02: there is no significant difference in the effect of climate change on secondary school Islamic Studies curriculum implementation based on school location

Table 4: showing significant difference in the effect of climate change on secondary school Islamic Studies curriculum implementation based on school location

Variable	N	Mean	SD	df	t	sig.	Decision
School Location	78	1.18	0.39	77	26.97	0.000	rejected
Climate Change		26.44	5.43				

Source: Data output from SPSS (version 25th) (2024).

The table above displayed the analysis of the effect of climate change on secondary school Islamic Studies curriculum implementation based on gender with the aid of t-test statistical tool. From the analysis, it was discovered that calculated t-value was 26.97 with significant level of 0.000. Since significant level of 0.000 was less than 0.05, hypothesis two is thereby rejected and therefore there is significant difference in the effect of climate change on the implementation of secondary school Islamic Studies curriculum in Kwara State based on school location. This implies that implementation of the curriculum is highly encouraging in some schools in Kwara State while slightly enjoyable in other schools.

Discussion of the Findings

Based on the analysis provided, discussion of the findings could be systematically explained

The finding of the study discovered that the population of male Islamic Studies teachers was higher than the population of female teachers in Kwara State and that the percentage of Islamic Studies teachers from urban schools was more than the percentage of Islamic Studies teachers from rural schools that participated in the study.

Furthermore, it was revealed in the study that effect of climate change on implementation of Islamic Studies curriculum in public schools in Kwara State was different. The effect was high in some schools while moderate in many other schools. This is line with the Francis (2014)'s conclusion that climate change has serious impact on teaching and learning of Financial Accounting curriculum implementation in Nigeria.

Similarly, the study revealed that gender has different influence on the effect of climate change on implementation of Islamic Studies curriculum in Kwara State. Ekpon and Ekpon (2011)'s work reported that there is significant difference in the teachers' awareness on effect of climate change on teaching and learning in Nigeria. Ekpon and Ekpon (2011) concluded that the level of male teachers' awareness is higher than female counterparts.

In the same vein, this study discovered that school location has different influence on the effect of climate change on implementation of Islamic Studies curriculum in Kwara State. This result is line with the finding of Sagala et al. (2019) that environment has significant influence on effect of climate change on the curriculum implementation in Indonesia.

Summary of the Findings

- 1) The finding of the study revealed that percentage of male teachers participated in the study was higher than female Islamic Studies teachers.
- 2) The finding of the study discovered that there was significant difference in the effects of climate change on the implementation of Islamic Studies curriculum in Kwara State based on gender
- 3) The finding of the study discovered that there was significant difference in the effects of climate change on the implementation of Islamic Studies curriculum in Kwara State based on school location

Conclusion

It was concluded in the study that climate change generates certain circumstances that affect proper implementation of secondary school Islamic Studies curriculum in Kwara State, Nigeria.

Recommendations

Based on the findings of the study the following were the recommendations raised in the study:

- 1) Teaching Service Commission in the state should train Islamic Studies teachers on how to manage every circumstance including climate change.
- 2) Ministry of Education should organize workshops to train teachers on how to manage circumstances in the state irrespective of gender.
- 3) Government should look in to effective ways to assist proper implementation of curriculum in all schools in Kwara State.

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