

## **Imperative of High Quality Climate Change Education for Combating Climate Change Crisis**

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### **Abstract**

Different interventions are being introduced and implemented by various governments of the world to mitigate and adapt to global warming causing climate change. While these are positive developments, the aspect of climate change education which includes causes and impact is underexplored and underutilised. The effect and consequences of climate change phenomenon are taking the back seat in terms of using education as one of the strategic interventions to tackle and combat the abnormal weather events experienced all over the world and in particular, in the developing countries where the manifestations are having adverse impacts on humanity, ecosystems and both movable and immovable properties due mainly to lack of useful education knowledge on mitigation and adaptation to the climatic crisis. Against the backdrop of this inertia of fostering climate change education as one of the potent interventions to tackle and combat climate change, this paper examines the important role of climate change education in tackling and combating climate change.

**Keywords:** Climate Change Pedagogy, Students, Skills and Competences, Mitigation, Adaptation.

### **Introduction**

Essentially, since climate change presents a threat to the present and future generations, it is imperative that it is addressed holistically. One of the ways to address the catastrophic impacts and effects of climate change is through teaching and learning about climate change to students (Robert et al., 2017). This is imperative because “climate change education helps people understand and address the impacts of the climate crisis, empowering them with the knowledge, skills, values, and attitudes needed to act as agents of change” (UNESCO, 2022). To this end, educators in the field should be able to teach students how to prepare for the present manifestation and an uncertain future arising from the imminent risks to human beings and ecological impacts and effects of climate change (Hung, 2022). This can be done through “a lifelong learning process and an integral part of quality education. It enhances the cognitive, socio-emotional and behavioural dimensions of learning and encompasses learning content and outcomes, pedagogy and the learning environment itself”

(UNESCO, 2022). Essentially, there is a plethora of literature on the understanding of climate change from diverse disciplines but literature on the imperative of climate change pedagogy is scarce and few that are available are not detailed enough to present the core value of the significance of teaching climate change as a module in a normal academic setting (Molthan-Hill et al., 2022). Rather, climate change is being taught as a sub-theme in modules instead of being accorded the status of a full-blown module. Take for instance, climate change is only a topic in a module in environmental study. It is against the backdrop of this inertia that this paper accentuates the significance of core climate change pedagogy to serve the purposes of making students have a full understanding of climate change and conceptions of climate change pedagogy for preparing students to be competent and be able to address both present and future climate change mitigation and adaptation measures to retard, tackle and combat its potential for catastrophic disaster.

### **Methodology**

The primary research method for this study is predominately a literature review with a combination of an analytical method. Against this backdrop, the author used existing literature in the field to address the issues surrounding why climate change should be a core module to be taught and delivered by competent educators to the students. To go about this, the author utilised the internet googles scholar search engine to source and retrieve contemporary germane literature in the field. The literature retrieved was thoroughly read, reviewed to identify gaps in literature and highlight the vacuum in order to establish the need to deploy climate change as a core module. Consequently, the paper made a substantial contribution to the body of knowledge and produced new insights into the subject area.

### **Statement of the problem**

Even though education plays a major role in addressing the various challenges of climate change and this seems to be recognised by the governments of the world and the international community, it seems apparent that the educational sector that has been identified and equipped with experts and professionals on climate change issues who are positioned to provide interventions to address the devastating impacts and effects of the bizarre weather effects remains underexplored and underutilized. The educational sector needs to develop a coherent framework for climate change

education. This paper seeks to address this inertia by showcasing the imperative role that climate change education should play in addressing and responding to the climate crisis and its complexity. Climate change education is imperative, hence not providing substantive pedagogy is a disservice to finding solutions to the crisis. Failure to deploy and teach climate change as a core module would deprive and deny students the knowledge, attitudes, dispositions, competencies and skills on how to mitigate and adapt to the climatic crisis.

### **Literature review**

There is an increased keen interest in the study and understanding of what climate change education entails in recent times (Moser, 2016). Also, there is a growing awareness and recognition of the various challenges that are inherent in how to address the problem hence this now creates an opportunity to conduct a cutting-edge research in the issues pertaining to climate change in order to have a broad and holistic understanding of what core climate change module pedagogy can contribute to overall efforts and ideas about effective climate change education (Leal Filho et al., 2018). Providing ample climate change pedagogy to students would have a potential impact on them because they will be knowledgeable about the overall impacts and effects of climate change (Dawson and Carson, 2017). The knowledge acquired will serve to equip them on how to mitigate or adapt to the changing climate. More importantly, having acquired this knowledge, students can also teach others in any environment they find themselves. In support of this position, assert that Baarova and Hibszer. (2022) asserts that “it is also important to know about the relationships present in the natural environment, between all its components. This knowledge, when imparted to children in the earliest school years, allows students to understand the impact of man on the environment and the consequences of these impacts.” Essentially, the climate education received would also assist in changing the mindset of the students and stop the attitude of business as usual. Against this backdrop, Baarova and Hibszer. (2022) remarked thus “climate change education is part of education about the environment in the context of the concept of sustainable development. It has a significant impact on the development of eco-social competences and inspires personal and social actions taken to counteract further climate change. Therefore, the main goals of climate education are to build a

sustainable future, practicing the ability to influence attitudes and behaviours at social and personal levels. In climate change education, it is considered necessary not only to learn to understand climate change, but also to change one's own behaviour.” For instance, fostering the use of alternative energy is one intervention that would have a significant impact on mitigation. At the workplace, advising employers to switch to energy efficient devices and equipments is also an important mitigation intervention. More significantly, advising on the use of renewable energy to power and operate equipment and machine would go a long way in reducing carbon emissions attributable to using fossil fuels to power and operate machines and equipment. All these will become possible because of the climate change education that equipped the workers who have been exposed and educated in climate change education interventions as significant measures and strategies to combat climate change (Monroe et al. 2019).

Competent professionals and educators with strong expertise in the field must be generally deployed and used to provide core climate change pedagogy as a potent tool intervention in addressing changing climate and its devastating, catastrophic manifestation and consequences on the environment, atmosphere, water and the planet earth as a whole (Verlie, 2022). According to Jimenez and Moorhead, (2021) “with increasing awareness of the gravity of our myriad threats to ecological sustainability, many education professionals worldwide have been devoting more curricular and pedagogical resources to raising students’ environmental awareness and implementing lessons and programs that address these issues through environmental and sustainability education.” Given their generally ample resources and freedom from national curriculum mandates, international schools can be ideal locales to study how schools envision, experiment, and implement education for environmental sustainability. However, curriculums do not unfold in a vacuum; rather, they are enacted by professional practitioners with diverse values and, at times, competing priorities” (Jimenez and Moorhead, 2021). Because of the various manifestations of the devastating impact and effect of climate change, it is now accepted that climate change pose imminent existential threats that must be confronted and combated otherwise, scientists’ prediction that it has the potential to make living things including human beings extinct would come to pass. Broad awareness creation is essential as one of the strategic measures and interventions.

Climate change education provides such proactive interventions as it entails providing pedagogy on how to tackle and surmount the crisis. This is supported by the UNESCO by indicating that “education sector response to the urgent and dramatic challenges the planet faces. The collective activities of human beings have altered the earth’s ecosystems so that our very survival seems in danger because of changes more difficult to reverse every day. To contain global warming before it reaches catastrophic levels means addressing environmental, social and economic issues in a holistic way” (UNESCO, 2020). This is a clarion call and as such educational policy and implementation of the government of the world must reflect mainstreaming climate change education as a core module in formal educational systems and also provide ample opportunities for citizens who are not in formal educational systems to be exposed climate change education. The overall benefits of these are that there will be awareness creation which will lead to knowledge about how to respond to the changing climate.

### **The imperative of Climate Change Education Intervention in Addressing Climate Crisis**

Essentially, the pedagogy of climate change is very crucial to promote climate action as it sets the stage and helps people to understand the various impacts and effects of bizarre weather events and how to address them (Perkins et al., 2018). Climate change pedagogy also empowers students with the requisite knowledge, skills, values and attitudes that are essential for acting as agents of change where, even, if it manifests, it would be properly managed and the impacts and effects would be minimised (Georgiou et al., 2021). Students are, therefore, equipped with knowledge tools to combat climate change especially about preventing the occurrence of climate change through various mitigation strategies and measures. However, if, eventually, the disaster manifests, they are also equipped to adapt to it (Galeote et al., 2021).

It is pertinent to point out that at the international level, the international community and the various agencies of the United Nations have continued to voice the importance of education and training as strategic measures of intervention to address climate change. To this end, the “UN Framework Convention on Climate Change,” the “Paris Agreement and the associated Action for Climate Empowerment (ACE)” agenda have significant provisions that speak to how to use education to educate, empower and engage global governments, all stakeholders, and major

groups on policies and actions relating to climate change education. This call is essential because the issues pertaining to climate change are generally complex because different people have differing views and opinions on whether climate change is real or not (Nordhaus, 2007).. What is certain is that it has been scientifically proven that climate change is real regardless of contrary views (Cagle and Herndl, 2019). It features different disciplines and these disciplines are to be deployed and used in climate change pedagogies in order to ensure proactive mitigation and adaptation to climatic events (Mbah et al., 2021).

Discharging this task requires the concerted efforts of educators and students where both will be engaged in inquiry and co-learning with specific outcomes that would result in skills to prevent, mitigate and adapt to climate change (Burt, 2020). This is said against the backdrop that climate change education currently lacks curriculum opportunities to address climate change in the classroom hence, the urgent need for using co-curricular and community initiatives for student investigations and learning. To achieve this, educators must provide the necessary pedagogic impetus that would encourage students to think critically and creatively about approaches to climate change mitigation and adaptation and develop students' capacity, skills and competencies required to respond with meaningful actions to address climate change crisis.

Remarkably, it is essential to point out that climate change pedagogy should be confined to the formal classroom alone, as a matter of fact, everyone needs to play both proactive and active roles in different ways and manners they know on a daily basis to prevent and protect the planet from being ravaged by the devastating and catastrophic impacts and effects of climate crisis. Tackling and combating climate change entails “acting as a global advocate and aiming to strengthen capacities of governments to provide quality Climate Change Education, produces and shares knowledge, provides policy guidance and technical support and implements projects on the ground and encouraging innovative approaches and enhances non-formal education programmes through media, networking and partnerships” (UNESCO, 2020). This assertion is made against the backdrop that global climate change is a global phenomenon and a threat that confronts human beings and its existence including the ecology environment hence, all toolkits in the toolboxes need to be

deployed and used to fight, tackle and combat climate change and broad education on climate change is one of the potent tools to achieve this objective and outcome (Sörlin and Wormbs, 2018).

Similarly, climate change education is all about learning how to mitigate and adapt in the face of threats and risks posed by climate change which most times are predictable due mainly to human activities (Pelling, 2010). Humans are in a confused state because they have never been in the situation now confronting the planet where there are manifestations of devastating climatic events caused by climate change (Beck, 2016). Presently, young people cannot be promised a stable atmosphere in their Lifetimes. Hence, the question now is what and how are we to teach to tackle and combat the threats and risks? Equally, it is apt to know how we engage students in order to prepare them for this uncertain future. These are germane questions that educators need to bear in mind always. Essentially, all hands need to be on the deck regarding the need for action on climate change. Addressing climate change requires the full cooperation of all stakeholders and society at large. To this end, there should be greater support for action, including climate education in schools and communities. The aspect of mainstreaming climate change education throughout formal education systems is considered the most important and effective means of developing capacities for addressing the climate crisis (Stevenson et al., 2017). The overall benefit of this is that there would be multiplier effects. This means that families and communities benefit when everybody shares what they have learned regarding adaptation and mitigation of climate change as strategies to tackle and combat the crisis. Interestingly, climate change education is holistic and all-inclusive because it featured prominently in all disciplines. Therefore, diverse disciplines need to proactively respond through collaborative problem-solving and innovation across multiple dimensions of environmental, social, economic, political, and educational institutions all serving the overall purpose of addressing climate change.

### **The link Between Climate Change Education, Mitigation and Adaptation**

It is generally said that there is a climate emergency confronting humanity and ecosystems and producing catastrophic devastative impacts and effects (Wood, 2022). These climatic manifestations and threats call for stringent implementation of both mitigation and adaptation interventions. Climate change education is one of the

intervention tools to ensure the realisation of mitigation and adaptation hence the mainstreaming of this will be beneficial in having the knowledge and skill on how to tackle and combat the crisis (Mochizuki and Bryan, 2015). Hence, the ability to mitigate and adapt to climate change requires sound education that will produce useful knowledge of how to go about implementing mitigation measures and adaptation strategies (Frantzeskaki et al., 2019). It is pertinent to point out that while “mitigation aims to stabilize and reduce the levels of greenhouse gas (GHG) in the atmosphere, however, due to the GHG concentration that is already present in the atmosphere, some effects of climate change will continue despite mitigation efforts, and therefore adaptation is needed” (Ratinen, 2021). Adapting entails deliberate and proactive interventions to tackle and address the crisis and one such is changing human behaviour of business as usual. Doing this would undoubtedly have beneficial effects on the environment and atmosphere hence solving the climate change problem (Ratinen, 2021). In order to effectively reduce the danger of climate change, there is a need for climate change education and strategies to tackle it such as mitigation and adaptation. Essentially, teaching about mitigation actions, solutions, and human impacts of climate change areas is less abstract because they are real; they can be implemented in various ways because they are clearly connected to everyday life, one of which is changing business as usual by reducing carbon emissions. This aspect has connections to students’ everyday life and is critically important to effective learning about how to tackle and combat climate change.

It is worth pointing out that while formal teaching of climate change is essential, equally important is the need to ensure that individuals should also be educated, in one way or another on how to take initiative and personal actions to mitigate climate change. Hence, in this sense, holistic education is also encouraged. More importantly, students that must have received formal climate change education can serve as proxies or conduits through which climate education on climate change is delivered in an informal way to their parents, communities, and society at large. This sort of education might be a platform or catalyst that challenges normative values that shape our world considering that climate change is a systemic problem that requires a change of behaviour and attitude. Changing behaviour and attitude connote deliberate steps to transitioning from unsustainable values and, practices like carbon-dependent forms of transportation, emitting carbon dioxide via the use of orthodox wood for cooking etcetera. To achieve this, it requires all and sundry to begin acting responsibly



by ensuring that all hands are on the deck for the purposes of developing the capacity and capability which would enable proactive interventions where collective actions are taken that would contribute to the reduction in greenhouse emissions. These interventions would undoubtedly bear fruits by transforming communities and societies into sustainable societies hence preventing the manifestation of bizarre weather events (Stevenson et al., 2017).

There is a very strong link between education, mitigation, and adaptation. These linkages reinforce the need to tackle and combat climate change. It should be noted, however, that while mitigation strategies are potent, they are still not enough to respond to climate change. Hence, individuals and communities will also need to adapt to future impacts that are unlikely to be avoided (Stevenson et al., 2017). Hence, consequence management automatically begins when the disaster manifests. This entails that, essentially, there must be room for preparing for current and potential consequences of climate change should the catastrophe strike. Also, since we cannot predict the implications of a future shaped by climate change, adaptation education is considered necessary to lower risk and vulnerability and build adaptive capacity and resilience (Wamsler et al., 2012). To this end, due to the unpredictable nature of climate change, there is a need for an approach to learning that is flexible and that builds capacity for responding to specific hazards as well as for reducing general vulnerabilities. Because the nature of climate change is extremely complex, it, therefore, means that adaptation is a necessity and there should be a continuous stream of activities, actions, decisions, and attitudes that inform decisions about all aspects of life and that reflect existing social norms and processes. It has been established that adaptation is a dynamic social process that is place-specific and responds to modified circumstances. This is the reason why adaptation education is considered an iterative process, where students develop the capacity for anticipatory and participatory learning (Stevenson et al., 2017).

### **Education as an Impetus for Understanding the Causes and Consequences of Climate Change**

To make an informed decision in any situation, there is a need for a basic understanding of the causes (who, what, and how) and the severity of the impacts and consequences of climate change to establish who and how people are affected and

impacted by it. It is equally important to know and establish the range of different mitigation and adaptation options and strategies that are available for tackling and combating it. Therefore, understanding the causes and consequences of climate change will enable one to have the requisite knowledge of the factors that make people vulnerable to climate change impacts and effects (Mochizuki and Bryan, 2015). Interestingly, climate change cuts across multiple issues and sectors, and as such, to teach it, the educator must approach and take an integrated and holistic approach. More importantly, the causes and consequences of climate change are numerous and multidimensional spanning the ecological, economic, political, ethical, and social domains. Climate change has the potential and in most cases is having a devastating effect on issues such as economic growth, political governance, water shortage, agriculture, energy supplies, class tension, and the distribution of goods. Climate change is also exacerbating many of the socioeconomic factors that make people vulnerable to it. Because it cuts through many disciplines, climate change should not be considered simply climate science, it should be addressed from an interdisciplinary and systems perspective. To this end, there is a need to cultivate a climate-literate public equipped with a full understanding of the basic principles of the earth's climate system; they should also have the knowledge and skill about how to assess and use scientifically credible information about climate to address any form or forms of climate change manifestation; have the ability to interpret, relay and apply information for purposes of discussing and addressing climate change and the attendant risks. Regarding effective teaching, its curricula should be characterized by curricular continuity that is sequenced in a way that considers learners' conceptions about climate change for understanding and competency on how to mitigate and adapt to it. Climate change education should ensure dissemination of the inherent processes associated with Climate change such as "climate, deforestation, habitat loss, water cycle, soil erosion, air pollution) as well as awareness of strategies to address pressing environmental concerns (e.g., reducing carbon consumption, encouraging low-carbon development, reducing deforestation through sustainable forest management, improving water and Climate Change Education in the Context of Education for Sustainable Development" (Bascopé et al., 2019).

Teaching should also entail the dissemination of information and knowledge on the impact and effect of the consequences of the delay in disseminating knowledge of current greenhouse gas emissions. It has been scientifically proven that the

consequences shall have catastrophic impacts on the security and development options of the present and future generations and as such, education intervention is one of the potent interventions to enlighten on the need not to delay in taking action on climate change. This calls for providing students with the knowledge that there is a need to ensure that mitigation strategy becomes the keyword and this can be achieved through sustainable consumption and production of goods and services. Climate change mitigation intervention is deployed to identify the causes of climate change and as soon as this is done, it will allow for the development of the knowledge of how to tackle and address climate change. To accomplish this, requisite skills and dispositions are required to rectify those imminent causes of climate change. It is therefore reiterated that mitigation-based educational programmes and interventions are generally essential because they would equip students and individuals with the values, knowledge, and skills to make informed decisions to ensure that natural resources are utilised responsibly and sensibly. More importantly, the curricula should include topics about energy consumption, the shift to non-polluting and renewable energy sources, environmental conservation, re-forestation, and re-greening. All these are proactive mitigation of climate change. Whereas teaching about climate change adaptation fosters knowledge on how to adapt if there is a climate emergency. Similarly, and remarkably, adaptation intervention seeks to ensure the reduction of the vulnerability of natural and human systems to the impacts of Climate change. Adaptation ensures that people adapt to a changing climate through adjustments in social, ecological, or economic systems. Adaptation prepares one to face and confront the disaster hence it plays a crucial role in managing the manifestations and probably adapt to them even during the climatic disaster (Bascopé et al., 2019).

### **The Imperative of Education in Tackling and Combating Climate Change**

Using climate change education intervention to tackle and combat the climate crisis is fully supported by Article 6 of the United Nations Framework Convention on Climate Change (UNFCCC) which directs countries of the world to consider education, training, and public awareness as integral responses to climate change. Certainly, to avert the worst of climate change crisis, . In this regard, there must be deliberate, cautious, and profound lifestyle changes, jettisoning of business as usual of business-dropping deployment and use of fossil fuels, and more importantly, shifting paradigm from fossil sources of energy to sustainable renewable sources. All these speak to the

sustainable use of resources in such a way that they will not cause harm to the environment and create a climate crisis. Although all interventions to address climate change crisis such as numerous political agreements, international treaties, protocols, green taxes and financial incentives, and technological solutions, are not enough to combat the crisis. There is a need to entrench a broader structural, cultural, perceptual, behavioural, and ideological shift through transformative shifts in how we think and act, and how we relate to present and future generations. All these are also necessary for the fight against climate change. Undoubtedly, education fills this vacuum because it plays a crucial role in climate responses whether in the knowledge of mitigation or adaptation. Interestingly, some of the high emitters of greenhouse gases countries such as China and Canada have started proactive climate change education by developing climate change action plans which include specific education initiatives, sometimes as a direct response to the visible local effects of climate change. These interventions imply that the government of these countries create broad awareness about the urgent need to stabilize the climate system and to prepare citizens and their societies for the challenges of climate change if they manifest in any way or form. While this is commendable, there is a need to ensure that the governments of the world mainstream climate change education in all schools, not only theoretically, but also practically where students are taught from the elementary level up to the tertiary level. It should be made compulsory at all levels. This will have a significant impact on students' lifestyles from infancy up to adulthood. Mainstreaming also entails that the citizens as a whole are perceived and considered as students, hence all human beings of all stages should be given the opportunity of climate change pedagogy using both formal and informal educational systems. The overall benefit of this is the desired outcome of achieving a clean environment because of low or zero greenhouse gas causing climate change.

### **Education as a Tool for Making Students Understand Climate Change and their Role in Alleviating the Crisis**

There is a need to reiterate that education is a significant tool to make students have the requisite knowledge of what climate change entails. To this end, students that have been taken through all these processes of climate change education during the course of pedagogy that fully equipped them with the requisite knowledge can be deployed to climate change mitigation and adaptation. Essentially, there is a need to

give students “of all ages the knowledge, skills, values, and agency to address interconnected global challenges including climate change, loss of biodiversity, unsustainable use of resources, and inequality. It empowers learners of all ages to make informed decisions and take individual and collective action to change society and care for the planet” (UNESCO, 2020). Therefore, education will make it easier for students to know the complexity and scale of climate change as well as its severity. Education also makes students recognize their role in contributing to or alleviating the impact and effect of climate change. It is pertinent to point out that climate change is not localized or domesticated, greenhouse gas emissions can have climate effects anywhere on the planet, regardless of where they were emitted. In this wise, even if the emissions are from the developed economies, they will still impact and affect developing economies even though they are known to emit very little or nothing. They bear the brunt of emissions misbehaviours of the developing economies that deploy and use massive fossil fuels to power their industry for operations and production. The manifestation of severe climate change consequences usually impacts people who live far away from the emissions. This is particularly true for African countries. The thrust of the matter is that the developed economies have been engaging in emitting carbon emissions from the beginning of the industrial revolution. Therefore, the total harm of global climate change did not result only from present emissions but from the total human-induced increase in atmospheric greenhouse gas concentrations that began with the rate race industrial revolution and continues to date unabated. Regarding the causes and effects, students should be made aware that it is the overall combination of different emissions from different role players that make a decisive difference in the atmospheric concentration of greenhouse gases. This noted, developing economies should not join the rat race bandwagon effect by also wanting to outdo or outclass developed economies by wanting to engage in using fossil fuels, rather, they should put all efforts into using renewable energy which does not emit carbon dioxide causing global changes. Developing economies should not mimic or copy the behaviour of developed economies. The developing economies should not be seen to seek revenge by wanting to also use fossil fuels and contribute to existing astronomical emissions currently in the atmosphere and environments causing climate changes. The confusion posed by the complexities of the causes, effects, and how to address climate change has continued to undermine the urge and need to act against the changing climate (Boykoff, 2011). Notably, the cause of climate change is

purely the aggregate as opposed to individual use of fossil fuels which is harmful to the environment. It will be difficult for individuals to have a full appreciation of their role in contributing to climate change. Whereas, if individuals become aware of their role in climate change, this would present an opportunity for them to want to change behaviours and abandon business as usual, and in turn, this will play a major role in ameliorating and resolving the crisis but if individuals do not stay alive to their responsibility as contributing to climate change, the opposite result will happen-manifestation of catastrophic and devastating of climate change. Knowledge of the impact and effect together with a broad understanding of the processes and activities driving climate change by the students will be an essential first step in motivating and empowering them to make sure that they take necessary action necessary to ameliorate climate crisis. Therefore, taking responsibility by becoming well-informed, can mitigate and adapt to the changing climate entails that the current students are acting responsibly and sensibly to ensure a sustainable planet while at the same time ensuring that if they act responsibly, this will make future students and generations to equally inherit and enjoy planet devoid of climate changes. At all times, as part of education for tackling and combat climate change, it is equally imperative for countries to “develop and expand educational activities that focus on sustainability issues such as climate change, biodiversity, disaster risk reduction, water, the oceans, sustainable urbanisation and sustainable lifestyles through” (UNESCO, 2023). To this end, all acts of climate-induced harm should be prohibited. Contemporary climate change pedagogy is one of the solutions to the crisis hence the need to ensure that it is elevated to a core module in a learning environment.

## **Conclusion**

Climate change education and programmes that seek to impart knowledge on how to address and reduce the impact and effect of climate change are unique strategic interventions and measures to bring down the heat and make the planet sustainable for present and future generations. The significance of education cannot be overemphasised. In many ways, education helps in developing critical skills to take informed decisions, solve complicated problems, having mental agility and logical thinking. Climate change is a threat to sustainable planet earth to address these threats and attendant risks, full and in-depth knowledge and understanding of the

causes of the problems are important to know how to intervene, proffer solutions and address them to avert the manifestations of the bizarre weather events. Climate change education teaches how to reduce all activities exacerbating climate change. While climate change adaptation teaches how to adapt and survive if there are manifestations of bizarre weather events. Having an in-depth knowledge and understanding of these two interventions for tackling and combating climate change is essential, hence education should be promoted in schools. Students should be afforded the opportunity to go through climate change pedagogy. More importantly, climate change education should be made a core module where it is made compulsory and all disciplines should be made to have it taught as a core module in their curriculum. This is said against the backdrop that the threat is real and there is opportunity to avert it. Climate change-based education is identified as one of the strategic interventions and measures for averting the threat.

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