



Empowering Girls and Combating Climate Change: Unleashing the Potential of Education and Gender Equality

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Abstract

As the most discriminated-against group in the world, girls face multiple challenges and discrimination due to their gender, age, poverty, ethnic background, and disabilities. Climate change disproportionately affects girls and women, yet they often have the least opportunity to adapt to its impacts due to social and economic factors. The devastating effects of climate change are expected to worsen in the coming decades, posing a significant threat to vulnerable communities in developing countries. Despite the critical role of education in promoting sustainability and addressing climate change, the education sector's contribution to climate change responses remains largely overlooked. This paper highlights the importance of empowering girls through education to combat climate change effectively and build a sustainable future. It explores how girls' education can enhance their adaptability, resilience, leadership skills, and decision-making abilities, ultimately contributing to climate change mitigation and adaptation efforts. Moreover, it calls for a shift in policy and action to recognize girls as key stakeholders and agents of change in the fight against climate change.

Keywords: Girls Education, Climate Change, Gender Equality, Empowerment of Women, Sustainability

Introduction

Girls face discrimination and abuse as a result of their gender and age. Other factors such as poverty, ethnic background, and disabilities can compound girls' challenges and discrimination, making them the world's most discriminated-against group. They face discrimination and abuse as a result of their gender and age. Furthermore, poverty, ethnic background, and disabilities can compound girls' challenges and discrimination (Plan International, 2019). Girls and women are affected differently by climate change than boys and men. Although climate change significantly impacts girls and women, they often have the least opportunity to adapt to the changes. Girls and women are, in some cases, denied power or the necessary resources, such as funding or technology (Plan International, 2019).

Climate change's effects are already devastating and will only worsen in the coming decades. By 2050, a 1.5-degree increase in global average temperature will expose 350 million more people to fatal heat waves, (Intergovernmental Panel on Climate Change, IPCC 2018). Climate change impacts, such as increased flooding, storms, and drought periods, disproportionately affect the most



vulnerable people in developing countries, who bear the least responsibility for the problem (IPCC, 2014).

However, the education sector that can advance girls' rights is almost non-existent in contributing to national responses to climate change. When education is discussed more broadly, it is referred to as a sector that must be mobilised or a set of abstract activities that must be carried out (e.g., education, awareness, and training). Rarely is the substance or quality of the education being provided mentioned as an important factor in determining how education might contribute to the kind of system-level transformation required to increase humanity's ability to reverse climate catastrophe (Kwauk et al., 2019).

Conceptualising Girls Empowerment and Climate Change

Girls and Education

Education plays an important role in promoting the knowledge, skills, and values required to achieve the lofty sustainability goals. It also teaches us how to deal with today's problems, such as global warming and climate change. Education plays a critical role in understanding, mitigating, and adapting to climate change for the sake of future generations' safety and well-being (Ember, 2020).

Empowering girls here implies educating girls to develop skills needed for sustainable development of their environment. Educating a girl benefits not only her own life but also the lives of her family, community, and society as a whole. Many societies remain in the dark and at a disadvantage by denying girls the right to an education. Lack of an education disempower girls and severely limits girls' participation in many activities that could benefit society; but education allows her to contribute innovative ideas (Ember, 2020).

Historically, education was only available to men in Sub-Saharan Africa and even Asia. This implies that women were disenfranchised in the formal employment sector from the start because jobs in this sector are primarily negotiable through education and skill acquisition (Alabi & Tope, 2014). Women's late entry into education and the design of education targeting women to meet primarily domestic household needs, limited opportunities for women outside of the home. The exclusion of women from public affairs is, however not unique to Nigeria. In Latin America, for example, while the educational system expanded earlier than in Africa, women were denied formal education during colonial rule. However, they often received training to enable them to perform domestic tasks and raise their children (Offorma, 2009).

Women continue to live in a male-dominated world that prioritises the man over the woman, even in modern times. This preferential treatment of males has persisted in the field of education (Alabi, 2014). However, an emerging reality today is that more and more women are becoming educated and attaining higher education degrees, thereby closing the gender gap. In fact, if this trend continues at its current rate, it will only take a few years for women in Nigeria to close the educational gap with men. As intriguing as this observation appears, it has implications for the formal labour sector and the nation's development (Imogie, 2008).

From the theoretical angle, the problem of girl-child education in Nigeria can be explained through the lens of gender oppression theory. According to the theory, women's situations are the result of a direct power relationship between men and women in which men have a fundamental and concrete interest in controlling, using, and oppressing women in the form of domination. The theory defines



domination as any relationship in which one party, the dominant (individual or collective), succeeds in turning the other party, the subordinate (individual or collective), into an instrument of the dominant's will (Oluyemi, 2016). It is understood to imply the denial of the subordinate's independent subjectivity (Lengermann, 1995).

Climate Change and the Environment

To accurately define climate change, it must meet five criteria (Santino, 2020): the definition must be empirically applicable, correctly classify different climates, not rely on our knowledge, apply to the past, present, and future, and be mathematically well-defined. No definition has been able to satisfy all criteria (Werndl, 2016). However, climate has been defined as long-term weather patterns (Herman, 2018). In contrast, climate change is a long-term shift in global or regional weather patterns (Climate change, 2019), which can be felt both in the long run through more gradual dilapidation of the environment and also in the short run through floods, landslide, hurricane, etc. The environment has been defined as the air, water, and land that people, animals, and plants live in or on (Cambridge Dictionary, 2020). Humans have been afflicted with diseases and even died due to the effects of climate change. This is expected to continue in the future due to changes in physical conditions, emissions, and atmospheric interaction caused by climate change. The air quality we breathe is affected by weather conditions and thus vulnerable to climate change (Träger, 2019).

Climate change is one of humanity's most pressing issues in the twenty-first century. It affects all ecosystems and human societies, but in different ways and varying degrees (Climate Change Education, 2016). Climate change issues must be included in public awareness, learning, and education to ensure a sustainable future. Climate change has created a socio-environmental challenge in Africa, with implications for the economy and socio-ecological system (Makina, 2016). Extreme weather, flood, and drought cause food insecurity, scarcity of water, and animal loss, which is most visible among the poor and vulnerable populations who rely on natural resources for one reason or another.

Theoretical Framework

Gender oppression theory posits that women's subordination and marginalization stem from power dynamics in which men exert control and suppress women's agency and independent subjectivity (Oluyemi, 2016). This theory helps to understand the historical context of girl-child education in Nigeria and its implications for women's exclusion from public affairs and formal employment opportunities (Alabi & Tope, 2014). In the past, education was predominantly accessible to men in Sub-Saharan Africa and Asia, limiting women's opportunities outside the home (Offorma, 2009). This gender-based exclusion from education and the formal workforce has contributed to women's vulnerability to various social and environmental challenges, including climate change.

According to the United Nations Development Programme (UNDP), gender equality, on the other hand, emphasizes the need to address and challenge societal norms, attitudes, behaviours, and power relations that perpetuate gender-based discrimination and inequality (UNDP, 2012). Achieving gender equality is crucial for combatting climate change effectively and building resilient societies. When girls and women are empowered through education and given equal opportunities, they can actively contribute to climate change mitigation and adaptation efforts (Kwauk, et al 2019).



The Relationship between Girls' Education and Climate Change in Nigeria

In Nigeria, girls' education is influenced by the historical gender oppression that denied women access to formal education and perpetuated their exclusion from public and economic spheres. However, an emerging reality is that more and more women are becoming educated, closing the educational gap with men (Imogie, 2008). This shift towards gender equality in education has implications for climate change in Nigeria.

Girls' education is crucial for combating the impacts of climate change in Nigeria. Education equips girls with the knowledge, skills, and critical thinking abilities needed to understand, mitigate, and adapt to climate change (Ember, 2020). Girls receiving quality education can develop "green skills" that enhance their resilience and adaptive capacity to climate change, preparing them to participate in traditionally male-dominated green sector jobs (Kwauk, 2017). Additionally, educated girls have more opportunities for leadership and decision-making, which are linked to pro-environmental outcomes (Lv, & Deng, 2019). Moreover, comprehensive education on sexuality, reproductive health, and gender issues can improve girls' sexual and reproductive health and rights, reducing fertility rates and empowering women to make informed choices about their lives (Haberland, 2015).

Promoting girls' education and achieving gender equality in Nigeria is essential for transforming the root causes of vulnerability to climate change, such as gender norms and power relations [McKinney, 2015]. A society that values and invests in girls' education will empower them and foster a sustainable relationship with the environment (UNDP, 2012).

Effect of Climate Change on Girls

Loss of livelihood; declining health; and poor finances are some of the consequences of climate change affecting girls' lives; others include changes in agricultural conditions, food and water shortages, natural disasters, and environmental crises (Kwauk, et al 2019).

Table 1: Impact of Climate Change on Sub-Saharan African Women Lives during 2014-2020 [11]

Main Categories	Subcategories
Loss of Livelihood	Malnutrition Increased Environmental Disorder
Diminishing Health	Weak Physical Health Unsteady Mental Health Reproductive Health Suffers Rise in incidence of diseases
Poor Finances	Increased Poverty Lack of Adequate Education

SOURCE: Ojenihun, 2020.



The impact of climate change on the daily lives of women in the area of livelihood is due to their reliance on land vulnerable to climate change and the responsibility they hold as the supplier of food, water, and energy for their households (Charlotte, 2020). Climate change impacts the agricultural sector, which primarily employs women. Temperature and precipitation changes affect harvest yields and animals; climate conditions also influence water availability for the land, animals and people (Louis, 2020). Girls and women are also disproportionately vulnerable to the health risks posed by climate changes (Jaren, 2022).

The impact of climate change on women's finances has resulted in their inability to afford basic health care for themselves or their families and the prevention of climate-related diseases. Poverty affects women farmers, leaving little room for the long-term adaptation required to combat climate change (Louis, 2020). Because of the difficulty and time spent searching for firewood and water for their families, they are unable to invest their time in other income-generating activities that can improve their financial situation or in obtaining an education that will keep them out of poverty. To make matters worse, in some communities, girls spend all their time looking for water and do not attend school, which means they cannot exploit the opportunities to lift themselves out of poverty. (Louis, 2020).

According to Plan International (Plan International, 2019), climate change exacerbates sexual exploitation and violence against girls. For example, suppose their water-collecting journeys become longer due to drought. In that case, girls become more vulnerable to these actions in their daily lives. In the midst of crises and instability, adolescent girls face an increase in abuse, sexual and other violence. As a result of climate change, the number of child marriages has increased in several countries. Due to increased poverty and decreased income and food security, girls may be forced to resort to transactional sex to obtain money and food. These acts may result in unintended pregnancies, STDs, and stigma (Transactional sex and HIV risk, 2018).

According to Santino, climate change has impacted natural resources that women rely on for energy, heat, and water, causing women to walk long distances to get firewood and water. Physical exhaustion and bodily damage can result from collecting firewood over a long period of time while risking falls, animal attacks, or criminal assault. These physical damages do not only affect the body but also the reproductive organs (Munien, 2014).

Impact of Girls' Education on Climate Change

To effectively combat the effects of climate change, all climate change stakeholders must be identified and included in policy decision-making (Awoyemi, 2020). Some researchers, such as Mearns, Robin, and Andrew (Mearns, 2009) and Swarup et al. (Swarup, 2011), have identified girls and women as climate change stakeholders due to the impact of climate change on their livelihoods and their unique and valuable knowledge about how to adapt to adverse effects of climate change.

Awareness is important for motivating action and for effective adaptation (Plan International, 2019). Furthermore, girls in the twenty-first century are growing up in a world that has transformed due to information and communication technology (ICTs) like mobile phones (Project Drawdown). More adolescent girls, educated and illiterate, having good knowledge about climate change and how to effectively adapt to its effects will go a long way in helping our communities and nation. Because raising awareness of climate change necessitates effective communication, sources of information and communication strategies play an important role (Awoyemi, 2020).



Girls' education helps mitigate and adapt to climate change in various ways. Their own adaptability improves, and the likelihood of finding long-term solutions increases (Plan International, 2019). Girls not only have the right to a high-quality education, but their education also contributes significantly to climate change mitigation (Project Drawdown). Furthermore, each additional year a girl spends in school increases the country's resilience, or ability to adapt to climate change (Kwauk, & Braga, 2017).

Girls' education increases gender equality, which helps to mitigate climate change and improves societies' ability to adapt to it. Education for girls also promotes humanity's ability to develop various technological, social, and societal solutions to climate change (Plan International, 2019). It also decreases inequality, which makes girls and women more vulnerable to climate change. On the other hand, girls' education necessitates promoting gender equality. As climate change worsens gender equality, climate change must be mitigated and adaptation to its effects ensured (Plan International, 2019).

Specifically, studies indicate that education for girls can help mitigate and adapt to climate change in three ways (Kwauk, 2017):

- A quality education helps girls develop "green skills," which not only increases their resilience and adaptive capacity to climate change but also prepares them to participate in and lead traditionally male-dominated green sector jobs (Muttarak, 2014).
- An empowering education can increase girls' opportunities for leadership and decision-making, both of which are strongly linked to pro-environmental and long-term outcomes (Lv, & Deng, 2019, Mavisakalyan, 2018).
- A transformative education that includes comprehensive sexuality, reproductive health, puberty education, and gender and power issues can improve girls' sexual and reproductive health and rights (Haberland, 2015). This has the primary benefit of increasing girls' reproductive rights and the secondary benefit of contributing to fertility rate declines in contexts with the highest rates of unmet contraception needs and where women have the least control over whether, when, and how many children they will have (Atkinson, 2015; Potts, 2013)

Thus, a society that has achieved gender equality in terms of girls' education has also attained a level of social transformation of the root causes of vulnerability to climate change (e.g., gender norms, attitudes, behaviours, and power relations) that is required not only to change social relations but also our human relationship with the more-than-human world (McKinney, 2015; UNDP, 2012).

The Way Forward

Girls are not only victims of climate change, but they are also genuinely interested in it and want to make a difference in their own lives, communities, and societies in general (Climate Change, Young Women, and Girls, 2018). Even in countries where women's agency in other areas is recognised, the climate change narrative primarily portrays women as passive assistance recipients rather than active solutions providers (Global Economy & Development Working Paper, 2019).

Even though girls face greater risks and vulnerability to climate change due to their gender and age, it is important to note that girls have received little attention in most discussions of gender and climate change (Gautam, 2008). This is due, in part, to climate policymakers' failure to adequately consider them as important stakeholders, beneficiaries, change agents, or communicators of good



practice. This situation is then replicated by climate decision-makers in climate policy and action (Mitchell, 2014).

Educating girls is critical for developing communities and, more broadly, society. Climate change, poverty, health issues, ignorance, lack of tolerance, and conflicts, among other global challenges, are best addressed through education. As a result, it is critical to educate girls so that they are empowered to contribute their own knowledge and experiences to finding and sustaining solutions to combat climate change. According to Eastern philosophy, a woman will shake the cradle with one hand while changing the world with the other (Ember, 2020).

According to Plan International research conducted in Bangladesh and Ethiopia, girls were asked what would most help them deal with the causes and effects of climate change. The girls stated three distinct priorities (Swarup, 2011):

- Greater access to quality education to enhance their knowledge, skills, and capacity to adapt to and reduce the risks of climate change.
- Greater protection from gender-based violence in response to the risks exacerbated by disasters and a changing climate, including child labour, child marriage, and sexual violence.
- Greater participation in climate change adaptation decision-making and risk reduction activities.

Furthermore, in the area of access to education, training and upgrading (in the context of climate) measures designed for training and continuing education could be particularly significant in the following areas:

- i. Awareness of the causes and consequences of climate change in order to sensitise women to the dangers of climate change and to the possible requirements/mechanisms of adaptation.
- ii. Awareness of existing mitigation and adaptation programmes in which women can be involved and from which they can benefit.
- iii. Training programmes on adaptation measures with a special focus on the needs of women (e.g., alternative cultivation methods and more resistant crops in agriculture, more efficient domestic and agricultural use of available water resources, alternative sources of domestic energy).
- iv. Training programmes on the use of (new) technologies (e.g., means of agricultural production, energy-efficient cooking stoves and ovens, renewable energy systems, information and communication technologies).
- v. Awareness of existing rights and laying claim to these rights in different spheres of life (e.g., land ownership or land use rights, ownership rights for means of production).

Conclusion

In conclusion, the intertwined goals of empowering girls and combating climate change through education and gender equality hold the key to a sustainable and prosperous future for our planet. This paper explored the critical role that education plays in shaping the attitudes, capabilities, and choices of individuals, particularly girls, who can become powerful agents of change in the fight against climate change.



Available evidence indicate that education has the transformative power to challenge traditional gender norms and discriminatory practices, enabling girls to break free from the shackles of inequality and take active leadership roles in environmental preservation and climate action. When the society provides girls with equal access to education, it unlocks their full potential and create a ripple effect that reverberates throughout communities, driving social progress and fostering environmentally conscious behavior. Moreover, gender equality and climate change are deeply interconnected, with women and girls disproportionately affected by the impacts of environmental degradation. When women and girls are empowered with education and equal opportunities, they are better equipped to adapt to climate change challenges and contribute to innovative solutions. Their unique perspectives, knowledge, and skills can enrich environmental policies, leading to more effective and sustainable approaches.

As we envision a future where the threats of climate change are mitigated and the potential of education is harnessed to its fullest, it is crucial for governments, international organizations, NGOs, and other stakeholders to collaborate closely. Investing in girls' education, particularly in climate-vulnerable regions, must be prioritized to address both immediate and long-term challenges effectively. As we move forward, it is essential to continuously evaluate and strengthen the impact of initiatives aimed at empowering girls and combating climate change. Monitoring and data collection will provide valuable insights into the effectiveness of policies and interventions, allowing for evidence-based decision-making and the refinement of strategies.

Conclusively, empowering girls and combating climate change through education and gender equality is not merely an option; it is an imperative. By unleashing the potential of girls worldwide, societies can cultivate a generation of leaders who are committed to sustainable development, environmental stewardship, and a more just and equitable world.

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