Repositioning Health Education for Sustainable National Development

Golda Obiageri Ekenedo.

Department of Health Promotion, Environmental and Safety Education,University of Port Harcourt

E-mail: golda.ekenedo@uniport.edu.ng

Abstract

Nigeria, a diverse and populous nation, faces significant health challenges that impact its sustainable development. To address these issues and build a healthier, more prosperous future, it is imperative to re-evaluate and strengthen health education curriculum and initiatives. This lead paper discusses the critical role of health education in promoting sustainable national development in Nigeria. It explores the current state of health education in the country both as a health care delivery strategy and as an academic subject and discipline. Gaps in health education curriculum delivery and key challenges where exposed. The paper illuminates opportunities for improvement with workable strategies proposed for effective repositioning of health education towards achieving the desired goals. Particularly the paper emphasised a paradigm shift in the health education degree curriculum as a major driver of the proposed change in health education delivery in various settings. It identified barriers and responsibilities towards repositioning health education in Nigeria. Conclusion was drawn to the effect that by understanding the importance of health education and effecting a paradigm shift in curriculum and delivery strategies, Nigeria can improve health outcomes, reduce disease burden, and create a more equitable and sustainable society. Suggestions made for effective repositioning include among others that health education professional associations should be proactive in advocating for a legislation for the professionalisation of health education so that we can have a regulated health education practice as is the case in advanced countries. They should equally be actively involved in the development and review of health education curriculum to continuously reflect societal shift.

Keywords: Health Education, Sustainable Development, Repositioning, Curriculum Reform.

Introduction

The tremendous transformations that have characterized the universe throughout civilizations were through scientific and technological developments. In as much as these developments were products of education and research, they also shaped future education and research as each invention welcomes new challenges that needs to be conquered. Hence, as the society advances, new challenges in health emerge. As new challenges emerge, reforms are required to adequately address them. The last few decades have witnessed a remarkable breakthrough in technological advancements, and which have equally exposed the planet to untold health and environmental crisis. As the global community grapple with the health challenges emanating from scientific and technological advancements, the need arises for reforms in all critical sectors including education to maintain sustainability in development and save the planet from their devastating effects.
The global health body, World Health Organisation (WHO) has always been proactive in continuously adjusting its strategies to meet with the ever-emerging health challenges associated

with advancements. These adjustments birthed health education, disease prevention, health protection and more recently, health promotion as strategies for addressing the continuously emerging global health problems. The deployment of these strategies and innovations in public health facilitates quality sustainable development by ensuring that environment and human health are protected and promoted by developmental activities.

Educating people and increasing their knowledge is considered among the main elements of empowerment and sustainable development (Shahmoradi et.al., 2018; Mohammed, 2022). Oguegbu (2022) affirmed that the nation with healthy individuals stands to excel in national growth and development. Health education as a strategy for sustainable development in health and environment has come a long way and has been pivotal in promoting health and well-being over the centuries. Since the history of health care, health education has been at the center of disease prevention, health protection and health promotion. Sheronen et.al. (2010) emphasized the role of health education in transforming people's behaviour and practices in a more responsible and sustainable way. Nevertheless, the current state of earth and human's vulnerability to environmental threats demands a new vision for health education that helps people to understand better the world in which they live, and to meet the future with hope and confidence, knowing that they can through their healthy attitudes and practices make positive contributions towards preserving the future.

Health education will achieve its full potential when it has an appropriate and robust curriculum with goals and objectives, content, resources, methods, and strategies appropriately tailored to the needs and context of contemporary society. The world is moving at a very fast pace driven by technological advancements. There is no way health education, as it currently is, will remain relevant to the society and achieve its goals if it doesn't keep pace with developmental trends. Hence, the need for a paradigm shift, a repositioning that fits the current societal shift. Repositioning health education is all about bridging gaps and embracing innovations.

Brief Overview of Health Education in Nigeria

Health education has been viewed variously by group and individual experts. According to WHO (1998) health education is *a consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, including improving knowledge, and developing life skills, which are conducive to individual and community health.* Health education is a social science that draws from the biological, environmental, psychological, physical and medical sciences to promote health and prevent disease, disability and premature death through education-driven voluntary behavior change activities (Coalition of National Health Education Organizations, 2009).

Health education is not limited to dissemination of health information, it is also concerned with individual persuasion, skill and confidence in translating acquired information into appropriate health behaviour. Health education is also concerned with communicating information about underlying social, economic, and environmental conditions that affect health, as well as individual risk factors and risk behaviours. It is concerned with the development of strategies to improve health knowledge, attitudes, skills and behaviour at the individual, group, institutional, community and systemic levels. Health education is a catalyst for change in human behaviour that results in preserved health and well-being of the individual and the environment.

The history of health education spans centuries and it has evolved in response to changing societal needs, scientific advancements, and educational philosophies (Ekenedo, 2024). From the printing of pamphlets and publication of books, in the ancient civilization through the teaching of hygiene in the 19th Century to the formalization of health education in schools and communities in the 20th century, health education continues to date to adapt to the changing landscape of global health challenges.

Health education is delivered to individuals or groups in various settings such as the school, community, workplace, prison, and hospital. In Nigeria, at the basic and secondary educational levels, health education is delivered mostly using integrated approach where elements of healthy living are incorporated into related subjects such as Basic Science, Biology, Home Economics, etc., emphasizing topics like nutrition, hygiene, reproductive health, and disease prevention. At the higher educational level health education is offered as certificate and degree programmes in colleges of education, schools of public health and universities. The certificate and degree programmes aim at the preparation of health education workforce in various settings. Community health education programmes are driven by various government and non-governmental organizations who implement health education programmes targeting specific populations, especially in rural areas. These programmes often focus on maternal and child health, sanitation, and the prevention of infectious diseases. The Nigerian government conducts campaigns to educate the public on pressing health issues, such as malaria, HIV/AIDS, and COVID-19, using mass media, workshops, and outreach activities. A lot of health education also go on in workplaces especially in large-scale industries where organisations can afford to provide the services. Health education wherever it is delivered continues to foster wholistic health in relation to the environment. Therefore, Jeronen et al. (2010) reiterated that health education should be developed in accordance with the factors and challenges of society, and that teacher education should embrace a paradigm shift that encompasses heavy reforms in learning content, methods, and resources.

Health education in higher institutions in Nigeria evolved from being offered in combination with physical education to a specialized discipline. Ejifugha (1999) reported that the first B.Sc. degree curriculum in health education was developed by the Nigerian Universities Commission (NUC) in 1989. This milestone was achieved through the unrelenting efforts of great pioneers of health education including Profs. Z. A. Ademuwagun, J. A. Ajala, J. O. Fawole, A. F. A. Folawiyo, I. O. Mensah B, O. C. Nwana, G. B. Onuoha, O. G. Oshodin, I. Owie, and C. O. Udoh. Presently, over 16 universities in Nigeria offer B.Sc. degree in Health Education. The curriculum was recently reviewed in 2023 under the NUC's CCMAS. Nevertheless, the CCMAS has come under intense criticism from members of the Academic Staff Union of Universities (ASUU) flawing the review process for being narrow and not involving enough of experts and important stakeholders.

The Concept of Development and Sustainable Development
Development is a positive concept that indicates progress, growth, and advancement. A society becomes advanced through developmental strides which involves adequate and effective deployment and management of human and material resources to propel growth (economic and otherwise) and improvement of the quality of life of its members. However, there are diverse opinions as to what development really means. Development has been viewed to be

multidimensional encompassing physical, social, environmental, political, and cultural components. Todaro (1981) defines development as *a multi-dimensional process involving the re-organisation and re-orientation of the entire economic and social system.* A simplified, generic definition of development as given by the Cambridge Dictionary (nd) which sees it as *the process in which someone or something grows or changes and becomes more advanced.* Hence the concept of development depicts progress and positive changes in different aspects of human life and society. Development is usually a positive shift from lower or ordinary levels of functioning to higher or superior levels. It is characterised by inventions, acquisition of new skills, expansion of knowledge and honing of capabilities (United Nations, 2024) aimed at promoting individual and collective welfare. Since inventions are a major part of development, potential negative impacts are possible.

When developmental projects become potentially harmful and constitutes a threat to the existence of future generations, it becomes unsustainable, that is, unjustifiable. Hence, there is a deliberate conscious effort at preventing and mitigating the threats that come with development. In other words, the negative consequences of developmental activities on the ecosystem that cause a breach in quality living in the future are consciously identified, modified, contained, controlled, and possibly eliminated. This deliberate consciousness in protecting the future from the negative impacts of developmental activities, more like the ethical aspect of development, has been pushed for decades and is referred to as sustainable development.

Sustainable development has been variously defined, but the one that is most used is the one by the World Commission on Environment and Development (1987) contained in a document known as "Our Common Future" which views sustainable development as *the development that meets the needs of the present without compromising the ability of future generations to meet their own needs*. Sustainable development aims at modifying the methods employed in innovating and using technology as well as other human innovations with the goal to conserve and protect the environment. It addresses issues related to demographic process, considerate use of natural resources, and mutual influences between human and the environment (Ayodeji, 2019). This idea of sustainable development has driven global innovations for the past decades culminating in the 2030 Agenda of Sustainable Development Goals (SDG) which comprises 17 goals. Seven of these goals are health-related including goals no. 1, target 1.3: Implement social protection systems and measures for all, including floors, and achieve substantial coverage of the poor and the vulnerable, which includes access to essential health services. Goal no. 2, target 2.2 aims to end all forms of malnutrition, including achieving targets set internationally to address stunted and wasted children under five years of age. Goal no. 3: focuses on good health and well-being, which is most directly related to health. Goal no. 6, target 6.1 is set to achieve universal and equitable access to safe and affordable drinking water for all; while target 6.2: aims to achieve access to adequate and equitable sanitation and hygiene facilities for all, with a focus on vulnerable populations. Sadly, reports have it that the world is facing significant challenges in achieving the SDGs with many of the goals stagnated especially in developing countries including Nigeria (United Nations, 2024).

Role of Health Education in Achieving Sustainable Development
The role that health education must play in achieving sustainable development consists in addressing health-related challenges comprehensively and promoting sustainable practices. Some

of the key reasons why health education is important in achieving sustainable development include:

Empowerment and Awareness

Health education empowers individuals and communities with knowledge about health risks, preventive measures, health behaviors, and access to healthcare services. This awareness enables people to make informed decisions about their health, contributing to improved well-being and quality of life. Health education offered in the school is an investment in a country's future and in the capacity of its people to thrive economically as individuals and as society (Ogakwu, 2010, Greensprings, 2018). Hence, Jeronen et al. (2010) submitted that health education for sustainable development is essential at all educational levels.

Health Equity and Social Inclusion

By providing equitable access to health education, marginalized and vulnerable populations can be reached, reducing disparities in health outcomes. Health education brings health information to all populations increasing their ability to understand and control determinants of health and their capacity to utilize available health services.

Promotion of Sustainable Health Practices

Health education encourages sustainable health practices such as sanitation, hygiene, nutrition, and environmental health. These practices not only improve individual health but also contribute to environmental sustainability and the resilience of communities to climate change and other environmental challenges addressed by the SDGs. Health education promotes sustainable consumption and sustainable lifestyle.

Prevention of Diseases and Health Risks

Educating communities about disease prevention, vaccination, reproductive health, and lifestyle choices helps prevent illnesses and reduces the burden on healthcare systems. This contributes to achieving SDG 3 (Good Health and Well-being) by promoting healthy lives and well-being for all at all ages.

Integration with other SDGs

Health education intersects with various other SDGs such as education (SDG 4), gender equality (SDG 5), clean water and sanitation (SDG 6), sustainable cities and communities (SDG 11), and climate action (SDG 13). By promoting health education, synergies can be created across these goals to foster holistic sustainable development.

Capacity Building and Resilience

Educating healthcare providers, educators, and community leaders strengthens their capacity to address health challenges effectively. This builds resilience within communities (Mohammed, 2022), enabling them to respond to health emergencies and adapt to changing health landscapes. Ogakwu (2010) advised on the need to go beyond awareness to mobilize communities into identifying their needs and taking appropriate actions to solve them. One of the core competencies of health education is community mobilization.

Economic and Social Development

Improved health outcomes through education lead to increased productivity, economic growth, and reduced healthcare costs. Healthy individuals are better able to participate in the workforce, contribute to economic development, and break the cycle of poverty.

Fostering Understanding of Public Policies

Public awareness, understanding and support are necessary for collective actions towards policy implementation. Achieving sustainable development depends on how well policies are implemented. Health education helps to breakdown government health-related policies and bring the grassroot to the proper understanding of the policy goals and their roles in achieving them.

Global Partnerships and Collaboration

Health education fosters collaboration among governments, non-governmental organizations (NGOs), international agencies, and communities. This collective effort is essential for achieving global health targets and promoting sustainable development worldwide. Through advocacy health education professionals bring stakeholders together in partnership and collaboration to pursue and achieve health goals for vulnerable groups and communities. They push for sustainable environment agenda and health policy developments.

Need for Repositioning Health Education for Sustainable National Development

The only thing that remains constant is change. Logically speaking, the changes in society warrant corresponding change in health education. This section of the paper highlights some of those changes that present a need for reforms in health education.

Emerging Health Threats and Prevalence of Preventable Diseases

Nigeria is currently facing several emerging health threats and a heavy double burden of disease. While the country is also dealing with neglected tropical and re-emerging infectious diseases, chronic and lifestyle diseases have swiftly escalated at the same time, thereby increasing the disease burden. Some of the currently emerging diseases include communicable disease, non-communicable diseases, vaccine preventable diseases, mental health, food insecurity and malnutrition.

The country is constantly dealing with outbreaks of diseases such as cholera, yellow fever, meningitis, and Lassa fever. It is estimated that 100 million people in the country are still at risk for at least one neglected tropical disease and there are several million cases of people being infected with more than one of them (Conversation, 2023). Other communicable diseases like malaria, tuberculosis, lower respiratory infections, HIV/AIDS, and meningitis remain major causes of death in Nigeria (Statista, 2022). These diseases and outbreaks are aggravated by poor sanitation and personal hygiene, and generally low health literacy, conditions that can be adequately addressed through proper health education and promotion.

There is a rising burden of non-communicable diseases like cardiovascular diseases, diabetes, cancer, and chronic respiratory diseases. The first WHO Global Status Report on non-communicable disease listed Nigeria and other developing countries as the worst hit with deaths from non-communicable diseases (WHO, 2023). These diseases with a rising burden in Nigeria include cardiovascular disease, cancer, diabetes, chronic respiratory diseases, sickle cell disease,

asthma, coronary heart disease, obesity, stroke, hypertension, road traffic injuries and mental disorders (Muhammad et al., 2017).

Despite progress in immunization, Nigeria remains at high risk of diseases like polio, and yellow fever. Mental health issues, including those resulting from trauma, harsh economy, and displacement, are becoming more prominent. In addition, significant food insecurity caused by bad economic policies, conflicts and displacement have led to significant food insecurity, contributing to malnutrition, especially among children.

These threats are negatively impacting quality of life and health indices and require that the scope of health education be expanded to accommodate them.

Advancement in Technology and Health Care

The rapid pace of technological advancement has profoundly impacted the healthcare landscape, necessitating a corresponding transformation in health education. This evolution is crucial for Nigeria to achieve sustainable development goals.

Health education should be improved in line with technological innovations in healthcare. For instance, digitalizing health records offer efficient data management, and facilitate health research (Cowie et al., 2017). Remote healthcare delivery through technology has expanded access, especially in rural areas (Nitisha et al., 2023). Mobile applications and devices are used for health monitoring, disease management, and health promotion (Broshkov, 2024). Health education can leverage mHealth for behavior change interventions, disease prevention, and health information dissemination. Furthermore, Artificial Intelligence (AI)-powered tools are used for diagnosis, drug discovery, and personalized medicine. Health education should aim at preparing individuals to understand and interact with AI-driven healthcare systems.

Shifting Societal Needs and Expectations

Nigeria, like many nations, is undergoing rapid socio-economic and demographic transitions. These shifts are significantly altering societal needs and expectations, necessitating a corresponding evolution in health education to ensure it remains relevant and effective for sustainable development.
Several key factors are driving these changes, they include:

i   Demographic transition: Nigeria's population is rapidly growing and aging, with a significant youth bulge. This demographic shift demands health education programs tailored to the specific needs of different age groups, from adolescent reproductive health to geriatric care.

ii   Urbanization: The increasing urban population brings new health challenges, such as non-communicable diseases, environmental pollution, and mental health issues. Health education must address these urban-specific concerns.

iii Globalization and technology: The world is becoming increasingly interconnected, exposing Nigerians to new health risks and opportunities. Health education must incorporate information about global health threats and leverage technology to improve access and engagement.

iv   Economic growth: As Nigeria's economy grows, lifestyle changes can lead to new health risks, such as obesity and diabetes. Health education must promote healthy lifestyles in the context of economic development.

v   Political and social changes: Political and social dynamics influence health behaviors. Health education should address issues such as gender equality, violence, and discrimination to promote overall well-being.

Link Between Health Outcomes and Inadequate Health Education

The correlation between health outcomes and health education is undeniable, and Nigeria's experience is a stark illustration of this relationship. Inadequate health education is a significant contributor to the nation's poor health indices, making a compelling case for repositioning health education for sustainable development.

Research findings have revealed different areas of health where the link between inadequate health education and poor health outcomes is manifested.

i   Knowledge Deficit: A lack of comprehensive health education leads to a dearth of knowledge about disease prevention, transmission, and management. This ignorance fosters misconceptions, myths, and harmful practices.

ii   Delayed Healthcare Seeking: Inadequate health education can delay or prevent individuals from seeking timely medical care. This delay can exacerbate health conditions, leading to complications and even death (Obiechina et al., 2015).

iii Poor Health Behaviors: Insufficient health education contributes to unhealthy behaviors such as smoking, excessive alcohol consumption, poor diet, and lack of physical activity. These behaviors increase the risk of chronic diseases (WHO, 2023).

iv   Low Utilization of Healthcare Services: A lack of understanding of the benefits of preventive care, maternal and child health services, and immunization can lead to low utilization of essential healthcare services (Obiechina & Ekenedo, 2013).

v   Perpetuation of Health Disparities: Inadequate health education often disproportionately affects marginalized and vulnerable populations, exacerbating existing health disparities.

Gaps in Health Education Degree Curriculum and Delivery

The health education degree curriculum and delivery in Nigeria face several challenges that limit its effectiveness. Some of the key gaps include:

1. Lack of Inclusion of Relevant Current Health Challenges:
   The curriculum does not adequately address emerging health challenges such as climate change-related health issues. Also, the curriculum is not sufficiently tailored to the specific health needs and challenges of Nigerian communities.

2. Limited Focus on Community-Based Health Education:

    The curriculum prioritizes a top-down approach to health education, rather than emphasizing community-based initiatives and participatory approaches. Students are not adequately prepared to work in community settings and engage with diverse populations.

3. Insufficient Emphasis on Research and Evidence-Based Practices:

    Many health education programs lack the resources and expertise to conduct research and evaluate the effectiveness of their interventions. The curriculum do not adequately emphasize the importance of evidence-based practices and the use of research to inform health education programs.

4. Insufficient Integration of Technology:

    Students lack digital literacy skills to effectively use technology in health education (Diyepiribo, 2024). The infrastructure and resources necessary to support technology-based health education may be limited.

5. Lack of Interdisciplinary Collaboration:

    Health education programs are usually too isolated from other disciplines, such as public health, social work, and psychology. A more integrated approach that incorporates knowledge and skills from multiple disciplines is needed to address complex health issues.

6. Inadequate Teacher Training and Development:

    Health education teachers do not have adequate opportunities for professional development and training. The quality of instruction in health education programs may be affected by factors such as teacher qualifications and experience.

Addressing these gaps requires a comprehensive approach that involves curriculum reform, increased investment in health education, and greater emphasis on research, community engagement, and interdisciplinary collaboration.

Areas of Repositioning Health Education for Sustainable Development

To address these needs, Nigeria must reposition its health education efforts to prioritize sustainability principles by embarking on curriculum reforms and educational innovations, enhancing educational infrastructure and resources, leveraging technology and innovations, engaging in collaborative partnership and interdisciplinary approaches, addressing social determinants of health, and embarking on a paradigm shift in health education degree curriculum.

Curriculum Reforms and Educational Innovations

Curriculum reforms and innovations have been affirmed as a crucial requirement for repositioning health education to meet contemporary health needs (Sadeghi, & Heshmati, 2019; Sabaiti et al., 2024). The required reforms and innovations should be such that address contemporary global and local health issues and educational methods. The following areas could be of importance.

        Integrating sustainability principles into health education curriculums.
Integrating sustainability principles into health education will help empower students to make informed choices that benefit their health and the planet. Several methods can be adopted for integrating sustainability principles into health education curriculum. One of such is infusing

sustainability throughout the curriculum. Rather than a separate topic, sustainability concepts can be weaved into existing lessons on nutrition, physical activity, and mental health. For instance, the environmental impact of food choices, the health benefits of active transportation, and the connection between nature and well-being. Also, active learning approaches can be employed whereby students are encouraged to explore real-world challenges through problem-based learning or service-learning projects. Again, health educators should aim at highlighting the interconnection between environmental and human health. This involves exploring how environmental factors like air and water pollution, climate change, and poor sanitation can influence health outcomes. Finally, emphasis is placed on promoting critical thinking skills. For instance, helping students learn how to evaluate the health claims of products and services.

Integration of digital health literacy and technology.

The integration of digital health literacy and technology involves leveraging digital tools and resources to enhance people's understanding and skills related to health information. This approach is crucial in empowering individuals to make informed decisions about their health and well-being helping individuals to make healthier lifestyle choices, prevent diseases, and manage chronic conditions more effectively, bridge the gap between rural and urban areas, empower communities to take ownership of their health and advocate for better healthcare services, and disseminate important health information to the population during disease outbreaks (Levy et. al., 2015).

The following can be considered for effective integration of digital health literacy and technology in Nigeria.

i   Invest in infrastructure: Expand internet connectivity and improve access to digital devices in rural areas.

ii Promote digital literacy: Implement programs to enhance digital skills among the population, especially in underserved communities.

iii Develop culturally relevant content: Create health information resources that are tailored to the needs and preferences of different cultural groups.

iv Foster collaboration: Encourage collaboration between government agencies, healthcare providers, technology companies, and civil society organizations to develop and implement innovative digital health education programmes.

Emphasis on practical applications and real-world scenarios.

Emphasizing practical applications and real-world scenarios makes health education curriculum more engaging, relevant, and effective in preparing students to be informed and responsible citizens who contribute to sustainable development.This includes providing experiential learning such as organizing field trips to relevant facilities, engaging students in community health projects such as health screenings, nutrition education campaigns or environmental clean-ups, and using role-playing and simulations to recreate real-world health scenarios. The community can be involved in curriculum delivery through collaboration with healthcare professionals to provide guest lectures, mentorship opportunities, and clinical experiences. Community leaders and parents can also be involved in curriculum development and implementation (Greensprings, 2018) to ensure relevance and cultural sensitivity.

There should be room for interdisciplinary approaches. Already, existing school curriculum adopted integrated approach in health education by integrating health education with other subjects like Basic science, Social Studies, etc. This approach provides a wholistic understanding

of health issues. It is also necessary to incorporate cultural perspectives and traditions into health education to make it relevant to students' lives (Center for Disease Control and Prevention [CDC], 2019).

Focus on skill-based health education as enshrined in the Nigerian School Health Policy will help to build personal competence, social competence and self-efficacy needed for health practices (CDC, 2019). Also, Performance-based assessments that measure students' ability to apply their knowledge and skills in real-world situations should be encouraged.

Integration of health education into the core curriculum.

Health Education in Nigerian schools is very important and should be highly prioritized (Greensprings, 2018). This is because it helps school children learn skills they will use to make healthy choices that have lifelong consequences (Greensprings, 2018). The integrated approach to health education that is currently in practice in the lower educational levels is flawed in that teachers of the various core subjects are more likely to gloss over the health information while paying more attention to their core subject contents. They lack knowledge, training, and expertise in teaching health education. This shortcoming is a possible explanation to why transfer of health knowledge from classroom to real life is lacking in health education.

Providing current and up-to-date health information.

In a rapidly evolving world, health information can become outdated quickly and new health problems and practices continuously emerge. Providing students with current and accurate information is essential for them to make informed decisions about their health and well-being. It also equips them to be effective advocates for public health initiatives. Current and up-to-date health information can be accessed by utilizing credible sources like government health agencies such as WHO, NCDC, and the Federal Ministry of Health; incorporating research findings from reputable universities; and accessing latest scientific evidence from peer-reviewed journals. The CDC (2019) clearly stated that today's state-of-the-art health education curricula should reflect the growing body of research which emphasises functional knowledge, personal and group values, beliefs, attitudes and norms that support healthy lifestyles and skills necessary for healthy living.

Current health information can also be accessed from credible online resources, social media, and health apps. However, a lot of caution should be applied in this regard and information and their sources confirmed before use. Health educators should stay updated on current health information by continuous learning through professional development and continuing education, attending conferences to stay informed about the latest trends and advancements, and networking with experts to gain insights and share knowledge.

Student engagement is yet another way of promoting up-to-date information. Health education teachers should facilitate discussions where students can share their understanding of health information and ask questions, organise debates on controversial health topics to promote critical thinking and open dialogue, and have students do presentations on current health issues to reinforce their learning and share information with their peers.

Enhancement of Educational Infrastructure and Resources

This consists of improving on the provision and use of educational materials and the health educators' knowledge and skills to enhance learning outcomes.

Teachers play a pivotal role in shaping the health knowledge, attitudes, and behaviors of students. It is, therefore, very crucial that school teachers should be trained in health education (Greensprings, 2018). Investing in their professional development is essential for ensuring effective health education that contributes to sustainable development. Broad-based skills that match current public health needs should be incorporated into professional preparation and continuing education of health educators (Bruening, 2018). By investing in teacher development, Nigeria can ensure that health education is delivered effectively, leading to improved health outcomes, reduced health disparities, and a more sustainable future.

One crucial strategy for repositioning health education in Nigeria is to enhance access to health education materials. To improve access to health education materials, different strategies can be implemented. Diverse multimedia materials such as videos, audio clips, and infographics should be used to cater to different learning styles and literacy levels. Information, Education and Communication (IEC) materials should be made culturally sensitive translated into local languages to ensure better understanding and engagement. Partnership and collaboration with government agencies, NGOs and CSOs, and the private sector can be leveraged to support production and distribution of IEC materials.

Leveraging Technology and Innovation

The integration of digital health literacy and technology involves leveraging digital tools and resources to enhance people's understanding and skills related to health education. This approach is crucial for empowering individuals to make informed decisions about their health and well-being (Broshkov, 2024). By providing access to accurate and timely health information, digital health literacy can help Nigerians make healthier lifestyle choices, prevent diseases, and manage chronic conditions more effectively, bridge the gap between rural and urban areas, empower communities to take ownership of their health and advocate for better healthcare services, and disseminate important health information to the population during disease outbreaks.

Effective integration of digital health literacy and technology into health education in Nigeria will require actions such as the expansion of internet connectivity and improved access to digital devices in schools and rural communities, promotion of digital literacy, and collaboration with government agencies, healthcare provider, technology companies and civil society organisations in the development and implementation of innovative digital health solutions.

Investing in digital health literacy and technology provides access to accurate and timely health information which can empower communities to take ownership of their health and advocate for better healthcare services, leading to more equitable and inclusive health systems. Digital tools can be used to monitor public health trends, and disseminate important health information to the population.

Collaborative Partnerships and Interdisciplinary Approaches

To effectively address the complex challenges of sustainable development, health education must adopt a more comprehensive and collaborative approach. This involves fostering partnerships between various stakeholders and integrating knowledge from different disciplines. An approach that includes collaboration between schools, government, non-governmental organizations, and

the private sector is necessary to achieve a robust health education intervention (Al-Worafi et. al., 2024).

Addressing Social Determinants of Health and Disparities

The social determinants of health (SDOH) play a significant role in shaping health outcomes. These factors, which include economic stability, education, social support, safe environment, and access to healthcare, often disproportionately affect marginalized and vulnerable populations. SDOH contribute to health disparities, with marginalized communities often experiencing worse health outcomes. Poor living conditions, limited access to healthcare and stress associated with SDOH can increase the risk of chronic diseases. Also, social determinants increase the risk of chronic diseases, influence health behaviours such as diet, physical activity and tobacco use, and limit access to health care services leading to delayed diagnosis and treatment. There is a need to explore how health education can address poverty, access to healthcare, and social inequities.

A Paradigm Shift in Health Education Degree Curriculum

The health education degree curriculum in Nigeria plays a pivotal role in promoting public health and fostering sustainable national development. However, given the evolving health challenges and societal needs, it is imperative to re-evaluate and reposition this curriculum to ensure its effectiveness, just as Frenk et al. (2022) suggested that education of health professionals is at a crucial moment for potential change. A paradigm shift is necessary at this time to support more representative and authentic educational experiences which can adequately equip our future graduates (Sbaiti et.al., 2024). The following key areas of repositioning can be addressed to ensure that health education degree curriculum remains relevant and effective in promoting sustainable national development.

Integration of emerging health issues.
The rapid emergence of new diseases and shifting health priorities requires constant adaptation. For instance, with the present surge in chronic diseases in the country, the content scope of non-communicable diseases as a course should be expanded to incorporate in-depth study of cardiovascular diseases, diabetes, cancer, and chronic respiratory diseases. The rising cases of mental health problems and suicide especially among the young population requires the curriculum be reviewed to lay appropriate emphasis on the importance of mental health promotion and prevention strategies. Focus should also be on issues like climate change, pollution, and their impact on health. The curriculum should address the challenges posed by new and re-emerging diseases like COVID-19 and Ebola.

Community-based approach.
Community engagement has been proposed as one of the important areas of focus for health education (Al-Worafi, et al., 2024). Health education curriculum should ensure that health educators are trained to work closely with communities to identify their specific needs and develop tailored interventions. Community members on the other hand should be encouraged to be active participants in health promotion programs. It is necessary to ensure that health education programs are culturally appropriate and respectful of diverse beliefs and practices. Health Education curriculum should make provision for the students to get involved in a robust community fieldwork experience. Presently, teaching practice experience in schools is the only practical field experience in the health education curriculum of degree students in Nigeria. This gives a narrow impression of the professional scope of health educators as being prepared only to

work in the school setting. The curriculum should be such that fosters research projects that address real-world health problems and contribute to community development. It should encourage students especially graduate students who have the capacity to engage in intervention projects in the community. If followed up, some of these projects can gain ground and escalate into an enduring project. Finally, the curriculum should emphasize the role of social, economic, and environmental factors in determining health outcomes.

Technology integration.

Technology empowers the health education curriculum (Wang, 2024). Modern health education curriculum should incorporate the use of technology, such as mobile apps, social media, and online platforms, to disseminate health information and engage with communities. Wang (2024) insists that the achievements of such health education curriculum are manifested in improved teaching quality; nurtured students' health concepts, knowledge, and skills; and enriched practical teaching in health education.

Digital health literacy is very essential for health educators so that they can help to build digital health literacy of the populace for better health outcomes. By providing access to accurate and timely health information, digital health literacy can help Nigerians make healthier lifestyle choices, prevent diseases, and manage chronic conditions more effectively, bridge the gap between rural and urban areas, empower communities to take ownership of their health and advocate for better healthcare services, and disseminate important health information to the population during disease outbreaks. Health educators should be taught how to use data to track health outcomes and evaluate the effectiveness of interventions.

Policy advocacy.

An impactful health education curriculum should incorporate courses that will equip health educators with the skills to analyze health policies and advocate for evidence-based interventions. It should foster an understanding of the health system and its role in promoting health equity.

Interdisciplinary collaboration.

Health education should not be siloed. The curriculum is expected to incorporate elements of psychology, sociology, anthropology, public health, and environmental sciences to provide a holistic understanding of health determinants. Courses like health sociology, health economics, health psychology etc., should be introduced where they do not exist. The curriculum should be designed to foster collaborative learning experiences among students from different disciplines to promote interdisciplinary problem-solving and innovation (Al-worafi, 2024). Elective courses, inter-departmental debates and student clubs are some of the ways of promoting collaborative learning. Multisectoral partnerships should be considered essential through collaboration with professionals from other fields, such as nutrition, social work, and environmental science, to address complex health challenges. Health education professionals must be equipped with leadership and interprofessional skills that support collaboration and a culture of health (Levy, et. al., 2015). The collaboration efforts should also be extended to research to integrate insights from various disciplines to inform health promotion practices. Health by its wholistic nature has link with virtually all academic disciplines paving way for easy collaboration. This potential should not be left untapped while fostering research collaboration.

Lifelong learning.

The health education curriculum should be designed to promote a culture of lifelong learning by encouraging students to stay updated on the latest health trends and research. Health education

departments should explore opportunities outside the institution to help students expand their professional skills by collaborating with related professional institutions such as the Red Cross, health and safety training institutes, and leadership training centres for training and certification of their students before graduation. There should also be emphasis on providing mentorship and networking opportunities to support students' career development and professional growth.

A paradigm shift in health education curriculum comes with a lot of benefits. First, a modernized curriculum will better prepare health education professionals to address the complex health challenges of the 21st century. Graduates with a broader skill set and a global perspective will be better equipped to improve health outcomes and promote health equity. Furthermore, a focus on interdisciplinary collaboration and technology-driven learning will foster innovation and creativity in the field of health education. By addressing global health issues and engaging with communities, health education professionals can make a more significant impact on public health.

Barriers to Repositioning Health Education Degree Curriculum for Sustainability

Repositioning health education degree curricula to meet the evolving needs of the field can face significant challenges. The challenges include resistance to change, resource constraints, meeting accreditation standards, lack of skills and expertise to deliver new curriculum, meeting the diverse needs of students, technological challenges, and sustainability.

Faculty and administrators may resist changes to the curriculum due to familiarity with existing practices and concerns about disrupting established programs. Also, institutional culture and policies may hinder curriculum innovation and flexibility. Implementing curriculum changes can require additional resources, such as staff development, new materials, and technology upgrades. Health education professionals may have limited time to develop and implement new curriculum components. Curriculum changes must comply with accreditation standards and guidelines, which can be time-consuming and challenging. Accreditation requirements may limit flexibility and innovation in curriculum design. Faculty may not have the necessary skills or expertise to teach new curriculum content or use innovative teaching methods. Again, providing faculty with opportunities for professional development and training can be costly and time-consuming. Students may have diverse educational backgrounds and learning needs, making it challenging to design a curriculum that meets everyone's requirements. Students may have different career aspirations, and the curriculum may need to be flexible to accommodate various pathways. Students may have unequal access to technology, which can hinder their ability to engage with online learning resources and participate in virtual learning experiences. Even where they have access to technology, issues with internet connectivity, device compatibility, and software glitches can disrupt the learning process. Repositioning curriculum requires ongoing commitment and investment to ensure its sustainability over time. Regular evaluation and adaptation of the curriculum are essential to maintain its relevance and effectiveness.
Overcoming these barriers requires a collaborative and strategic approach, involving health educators, administrators, students, and stakeholders from the broader health education community. If these challenges are proactively addressed, institutions can ensure that their health education programs remain relevant, effective, and responsive to the evolving needs of the field.

Conclusion

Health education plays outstanding roles in promoting sustainable development. To address sustainability, health education must make significant adjustments in curriculum approach. This will involve efforts in several directions including: Embracing technology; Updating health information; Engaging in collaboration; Expanding academic curriculum to include health promotion and sustainability principles; Investing in infrastructure and professional development among others. To achieve the needed repositioning, this paper asserts that the health education professional bodies have a significant role to play.

Suggestions

1. The government, higher institutions and stakeholders should prioritize health education programmes in all settings and make deliberate efforts to implement it by providing structure and budget.
2. A 2 units course in health education should be made a compulsory General Studies course in all Universities in Nigeria to enhance health literacy and encourage lifelong learning.
3. Teacher training curricula in universities for all education students should include "School Health Programme" as a compulsory course. This will address the poor awareness and implementation of the School Health Programme at the basic education level in Nigeria.
4. Professional associations in health education and health promotion should prioritize advocacy for a legislation for the professionalization of health education and the establishment of a health education credentialling council.
5. Health education credentialing should be a requirement for health education practice as is obtained in developed countries.
6. The health education degree should be modified to B.Sc. Health Education and Promotion to enhance robustness in line with the advocated curriculum reform as is the global practice.
7. The government and academic institutions should provide adequate funding of health education programmes especially in the areas of infrastructure, professional development and research.
8. Professional bodies should incorporate training workshops in their annual conferences to provide opportunities for continuous professional improvement of health educators.
9. Health education undergraduates should be part of the SIWES – (Student Industrial and Work Experience Scheme) programme of universities for a qualitative and impactful field experience.

References

Al-Worafi, Y.M. (2024). Public Health Education, Practice, and Research in Nigeria. In: Al-Worafi, Y.M. (eds) *Handbook of Medical and Health Sciences in Developing Countries.* Springer, Cham. https://doi.org/10.1007/978-3-030-74786-2_564-1

Ayodeji, A. A. & Omosowon, J. F. (2019). *The role of health education in sustaining the environment and well-being in Nigeria.* 10.13140/RG.2.2.30352.87044.

Broshkov, D. (2024). The role of mobile apps in health management and diagnosis. https://zenbit-tech.medium.com

Bruening, R. A., Coronado, F., Auld, M. E., (2018). Health education workforce: Opportunities and challenges. *Preventing Chronic Disease: Public Health Research, Practice and Policy, 15* E89. www.cdc.gov/pcd/issues/2018/18_0045.htm

Cambridge Dictionary (nd.). *Development.* www.dictionary.cambridge.org
CDC (2019). Health education curriculum analysis tool (HECAT)overview. https://www.cdc.gov/healthy-youth/hecat/

Coalition of National Health Education Organizations (2009). .http://www.cnheo.org/PDF%20files/ health_ed.pdf.

Cowie, M. R., Blomster, J. I., Curtis, L. H., et. al. (2017). Electronic health records to facilitate clinical research. *Clinical research in cardiology : official journal of the German Cardiac Society*, *106*(1), 1–9. https://doi.org/10.1007/s00392-016-1025-6

Diepiribo, A. (2024). Assessment of Digital Literacy Skills Among Physical and Health Education Students in Secondary Schools in Bayelsa State. *British Journal of Education. 12*. 23-31. 10.37745/bje.2013/vol12n22331.

Ejifugha, A. U. (1999). *Development of health education in Nigeria*. Canun publishers Ltd. Nigeria.

Ekenedo, G. O. (2024). *Introduction to Health Education*. Iyke Communications: Port Harcourt

Ekpo, F. U. (2023). 100 million Nigerians are at risk of neglected tropical diseases: what the country is doing about it. *The Conversation*. www.theconversation.com

Frenk, J., Chen, L. C., Chandran, L., et al. (2022). Challenges and opportunities for educating health professionals after the COVID-19 pandemic. *Lancet 400*, 1539-56.

Greensprings Schools, (2018). Why health education is important in Nigerian schools. https://enrol.greenspringsschool.com/health-education-in-nigerian-schools/

Healthy children, (2009)

Jeronen, Kaikkonen and Lindh (2008). Health education in the perspective of sustainable development in teacher education. In Tapola, H., Suntioinen, S., & Karjalainen, K. (Eds) (2010), *Forum on global responsibility in research and education – Practices in partnerships and daily activities*. University of Eastern Finland.

Levy, M., Gentry, D., & Klesges, L. M. (2015). Innovations in public health education: promoting professional development and a culture of health. *American journal of public health, 105* (Suppl 1), S44–S45. https://doi.org/10.2105/AJPH.2014.302351

Mohammed, A. (2022). Health, Education 'Cornerstones of Sustainable, Equitable Development'. *Address of the Deputy Secretary-General at the Launch of reports of the Independent Evaluation of Sustainable Develop Goals (SDGs) 3 and 4*. Abuja, Nigeria.

Muhammad, F., Abdulkareem, J.H., & Chowdhury, A.A. (2017). Major Public Health Problems in Nigeria: A review. *South East Asia Journal of Public Health, 7*, 6-11.

Nitisha, D. Singh, S. & Kumar, K. et. al. & Chaudhary, Mohita & Goyat, Sourav. (2023). *Revolutionizing Rural Healthcare: A Review of Telemedicine's Impact and Challenges in Remote Communities.* 10. 10.5281/zenodo.7831797.

Obiechina, G. O. & Ekenedo, G. O. (2013). Factors affecting utilization of university health services in a tertiary institution in south-west Nigeria. *Nigerian Journal of Clinical Practice, 16*(4) DOI:10.4103/1119-3077.116888

Obiechina, G. O., Ekenedo, G. O. & Akingbola, O. O. (2015). Treatment outcome of directly observed therapy short-course for pulmonary tuberculosis patients in a Nigerian tertiary institution: An eight-year review. *East African Journal of Public Health, 12*(2), 1075 – 1079.

Ogakwu, V. (2010). A comparative analysis of supervisory control measures in public and private secondary schools in Enugu state. *Knowledge Review 21*(3), 25 - 32.

Oguegbu, A. (2022). Health education and promotion panacea for achieving sustainable development goals in Nigeria. *Research and Reviews on Healthcare: Open Access Journal, 7*(2), 719 – 725. DOI: 10.32474/RRHOAJ.2022.07.000260

Sadeghi, R. & Heshmati, H. (2019). Innovative methods in teaching college health education course: A systematic review. *Journal of Education and Health Promotion. 8*. 10.4103/jehp.jehp_357_18.

Sbaiti, M., Abbara, A., Al-Haffar, M., Budhathoki, S., Wihba, K., Cardoso Pinto, A., Streule, M. (2024) Curricular innovations to address inequalities in global health education. *European Journal of Public Health, 34*, (I). https://doi.org/10.1093/eurpub/ckae144.1231

Shahmoradi, L., Changizi, V., Mehraeen, E. (2018). The challenges of E- learning system: Higher educational institutions perspective. *Journal of Education and Health Promotion, 7*, 116.

Statista (2022). *Coronavirus (COVID-19) cases in Nigeria 2022, by status.* Statista Research Department www.statista.com

Todaro, M. (1981). *Economic Development in the Third World (2nd ed.).* New York: Longman.
United Nations, (2024). Progress towards the sustainable development goals. *A Report of the Secretary General.*

Wang, H. (2024). Construction and Implementation of Health Education Curriculum from the Perspective of Internet Technology. *Educational Innovations and Emerging Technologies, 4*(3), 1-7. https://doi.org/10.35745/eiet2024v04.03.0001

WHO (2023). Noncommunicable diseases. https://who.int/new-room/fact-sheets/detail/noncommunicable-diseases

WHO, (1998) *Health promotion glossary*. Geneva, WHO. http://www.who.int/hpr/NPH/docs/hp_glossary_en.pdf

WHO, (2019). Nigeria fulfils commitment, launches Plan for the Prevention and Control of Non-Communicable Diseases. *https://www.afro.who.int/news/nigeria-fulfils-commitment-launches-plan-prevention-and-control-non-communicable- Disease*

World Commission on Environment and Development (1987). *Our common future.* Oxford University Press. *ISBN 019282080X.*