Applying Indigenous Management Technology as a Tool in Repositioning the Healthcare and Educational System of Nigeria

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Abstract

This study is aimed at repositioning Nigeria's education and healthcare system through indigenous health technology in management. Exploratory design was adopted for the study in which qualitative data was obtained through in-depth review of relevant literature and the researcher's personal observation of the scenario. The study explained the concept of indigenous heath technology and its role in education and health care system**.** The study showed that indigenous health technology in management is vital for improving health literacy, preserving cultural knowledge, enhancing access to healthcare, and promoting equity. However, the challenges of indigenous health technology in management were highlighted and recommendations were made.

Keywords: Healthcare, education, management, indigenous health and technology**.**

Introduction

Nigeria's education and healthcare sectors are pivotal to the nation's socio-economic development. However, these sectors face significant challenges, including inadequate infrastructure, insufficient funding, and a shortage of skilled professionals. Indigenous health technology, which combine traditional knowledge with modern technology, offer a promising pathway to transform these sectors. By strategically managing this system, Nigeria can improve service delivery, enhance access to quality education and healthcare, and promote sustainable development. (Okebukola, 2015).

Repositioning Nigeria's education and healthcare sectors through indigenous health technology in management is a transformative approach that addresses local challenges with locally relevant solutions. By integrating health education into the educational framework using indigenous technologies, Nigeria can improve educational outcomes and promote better health practices among its population. Collaboration, investment, and a commitment to sustainability are key to making this vision a reality. With concerted effort, Nigeria can leverage its indigenous knowledge and technological advancements to create a brighter future for its education and healthcare system. (Makinde & Ojerinde, 2020).

This approach involves using digital platforms, mobile applications, and interactive tools to deliver health education and services, thereby improving access to information and resources. Indigenous technology is tailored to the specific needs and conditions of Nigerian communities, making them more effective and sustainable than imported technologies. (Abubakar, et al., 2022). Despite their potential, the successful implementation and scaling of these innovations face several obstacles, including infrastructural deficiencies, digital literacy gaps, funding limitations, and a lack of supportive policies. (Ali & Ojuola, 2020). Therefore, this study seeks to explore how indigenous health technology can be used as a tool in repositioning the healthcare and educational system of Nigeria.

Statement of the Problem

Nigeria, a nation with a rich cultural heritage and abundant natural resources, faces significant challenges in its education and healthcare system. The education system is marked by overcrowded classrooms, insufficient infrastructure, a shortage of qualified teachers, and limited access to learning materials. These challenges contribute to high dropout rates and low literacy levels, particularly in rural and underserved areas. Similarly, the healthcare system struggles with inadequate facilities, a shortage of medical personnel, and limited access to essential services, resulting in poor health outcomes and high rates of preventable diseases. However, adopting and managing indigenous health technology in these sectors present a promising solution.

Aim and Objectives

This work is aimed at repositioning Nigeria's education and healthcare system through indigenous health technology in management. However, its specific objectives include;

(i) To identify the indigenous technology in management that have been implemented in Nigeria's education and healthcare system.
(ii) To identify the challenges of indigenous technology in management of Nigeria's education and healthcare system
(iii) To recommend ways for successful implementation of indigenous technology in management of Nigeria's education and healthcare systems.

Methodology

The paper adopted the exploratory research design in which qualitative data was obtained through in-depth review of relevant literature and the researcher's personal observation of the scenario.

Literature Review

Indigenous Health Technology in Management

According to Okebukola, (2015) indigenous health technology focus on integrating traditional knowledge and modern technology to improve health outcomes and education for indigenous communities. By integrating these elements, indigenous health technology in education aim to enhance health outcomes, preserve cultural heritage, and empower indigenous communities. These technologies include;

E-Learning Platforms: Locally developed e-learning platforms that incorporate health education content can provide accessible and relevant learning experiences for students.

Mobile Health Applications: Applications that deliver health education and services via mobile phones are particularly effective in remote areas. Apps focusing on maternal health, disease prevention, and mental health education have proven beneficial.

Teacher Training Programs: Utilizing technology to create comprehensive training programs for teachers can improve the quality of education (Okebukola, 2015).

Traditional medicine integration: Nigeria has a rich heritage of traditional medicine, practiced by various ethnic groups. Integrating this knowledge with modern technology can enhance healthcare accessibility and effectiveness.

Indigenous health technology can bridge the gap between challenges and solutions in both education and healthcare. These technologies are rooted in local knowledge and tailored to the specific needs and conditions of the Nigerian context. By focusing on locally relevant solutions, these technologies can be more effective and sustainable than imported technologies. (Oye, Iahad & Rahim, 2011). Indigenous health technology plays a crucial role in education by addressing unique challenges faced by indigenous communities and enhancing the delivery of culturally relevant and effective health education. Here are several key roles these technologies fulfill:

- Enhancing Accessibility to Health Education
- Preserving and Promoting Indigenous Knowledge
- Improving Health Literacy
- Empowering Indigenous Health Practitioners
- Facilitating Community Involvement
- Promoting Health Equity
- Supporting Mental Health and Well-being

The role of management in using indigenous health technology in education and healthcare system

Management plays a crucial role in the successful implementation and utilization of indigenous health technology in Nigeria's education and healthcare system. Effective management ensures that these technologies are integrated seamlessly, scaled appropriately, and sustained over time. Here are the key roles of management in this context:

Strategic Planning and Policy Formulation: Define clear objectives and outcomes for integrating health technology into education and healthcare systems. Develop supportive policies that promote, protect intellectual property, and encourage the adoption of indigenous technologies. (Oye et al., 2011).

Resource Allocation and Funding: Secure and allocate funds necessary for the development, implementation, and maintenance of indigenous health technologies. Establish funding channels such as grants, loans, and public-private partnerships to support local innovators and scale successful initiatives.

Capacity Building and Training: Organize training programs to equip teachers, healthcare workers, and administrative staff with the skills needed to effectively use and manage these indigenous technologies. Implement ongoing training and development programs to keep personnel updated and best practices.

Infrastructure Development: Invest in building robust digital infrastructure, including internet connectivity, hardware, and software, to support technological integration. Ensure that educational institutions and healthcare facilities are equipped with the necessary tools and resources to utilize these technologies effectively.

Community Engagement and Stakeholder Collaboration: Engage stakeholders, including government agencies, private sector partners, NGOs, and the community, in the planning and implementation process. Conduct awareness campaigns to educate the public about the benefits and availability of these indigenous technological. (Ukpong-Umo, 2018).

Through these roles, effective management ensures that indigenous health technologies are not only integrated into Nigeria's education and healthcare systems but are also used to their fullest potential to address the unique challenges faced by these sectors. This strategic approach promotes sustainable development, enhances service delivery, and improves the overall quality of life for the Nigerian population. (Ali & Ojuola, 2020).

Theoretical Review

This paper is anchored on the system theory, often referred to as General Systems Theory (GST), it is an interdisciplinary theory that aims to understand and analyze the complexity and interrelationships within systems. It was primarily developed by Ludwig von Bertalanffy in the mid-20th century. (Venkatesh, et al., 2012).

Repositioning education through indigenous technology requires a systems approach that considers curriculum development, teacher training, community involvement, and policy support as interconnected elements. Implementing indigenous health technologies in healthcare systems involves integrating traditional practitioners, modern healthcare providers, supply chains for traditional medicines, and health education programs into a cohesive system. The

theory provides a holistic approach to studying systems by considering them as integrated wholes rather than isolated parts. Systems theory views organizations as complex systems with interrelated parts. Changes in one part of the system affect the entire organization.

Challenges

According to **Ocholla,** (2017) while the integration of indigenous health technological in education holds great promise for improving Nigeria's education and healthcare system, several significant challenges must be addressed to ensure successful implementation and sustainability. These challenges span across infrastructural, socio-economic, and policy-related aspects.

Human Resource Challenges: There is a shortage of trained personnel with the skills to develop, implement, and utilize these indigenous technologies.

Regulatory and Policy Challenges: The absence of well-defined policies and regulatory frameworks can create uncertainty and hinder the use of these technologies.

Maintenance and Support: Ensuring the ongoing maintenance and support of these indigenous technologies can be challenging, particularly in resource-constrained settings.

Infrastructure Issues: Inadequate infrastructure, such as unreliable electricity and poor internet connectivity, can impede the implementation of indigenous technologies.

Funding Constraints: Sustaining and scaling up indigenous technologies often require significant financial resources, which may be scarce or inconsistently available.

Low Digital Literacy skills: Low levels of digital literacy among some indigenous populations can limit their ability to effectively use indigenous health technologies. (Aderinoye, et al., 2017).

Conclusion

From the study, it was concluded that repositioning Nigeria's education and healthcare system through indigenous health technology in management represents a transformative approach to addressing the persistent challenges faced by these critical sectors. By leveraging local knowledge and context-specific technological solutions, Nigeria can create sustainable improvements that are culturally relevant and widely accepted. These technologies include digital platforms, mobile applications, and interactive tools has the potential to enhance both educational and health outcomes significantly. These technologies can provide students and communities with crucial information and resources, fostering a more informed and healthier population.

However, the successful implementation of these technologies requires a concerted effort to overcome several obstacles, including infrastructural deficiencies, digital literacy gaps, funding limitations, and a lack of supportive policies. Addressing these challenges involves enhancing infrastructure, building digital literacy, securing funding, ensuring cultural relevance, and developing robust monitoring and evaluation frameworks. By focusing on these areas, Nigeria can harness the power of indigenous health technological in management to create a more equitable and effective education and healthcare system. This comprehensive strategy will not only improve individual outcomes but also contribute to the overall socio-economic development of the country, paving the way for a brighter future for all Nigerians.

Recommendations

The following recommendations were made to ensure the implementation of indigenous technology in management.

Enhance Infrastructure: Invest in expanding internet access and improving electricity supply, particularly in rural areas. Renewable energy solutions and public-private partnerships can play a crucial role.

Increase Funding and Resource Allocation: Prioritize investment in research, development, and implementation of indigenous health technologies through government budgets, international partnerships, and private sector contributions.

Capacity Building and Skill Development: Develop comprehensive training programs to build the capacity of healthcare workers, educators, and administrators in the use and management of indigenous health technologies. Foster partnerships between educational institutions, training centers, and technology companies to provide hands-on training and professional development opportunities.

Promote Awareness and Acceptance: Conduct public awareness campaigns to educate stakeholders about the benefits of indigenous health technologies and dispel misconceptions or resistance to change.

By implementing these recommendations in a coordinated and systematic manner, Nigeria can overcome the challenges associated with integrating indigenous health technological in managing the education and healthcare systems leading to improved access, quality, and equity in service delivery, as well as enhanced health outcomes and educational opportunities for all.

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