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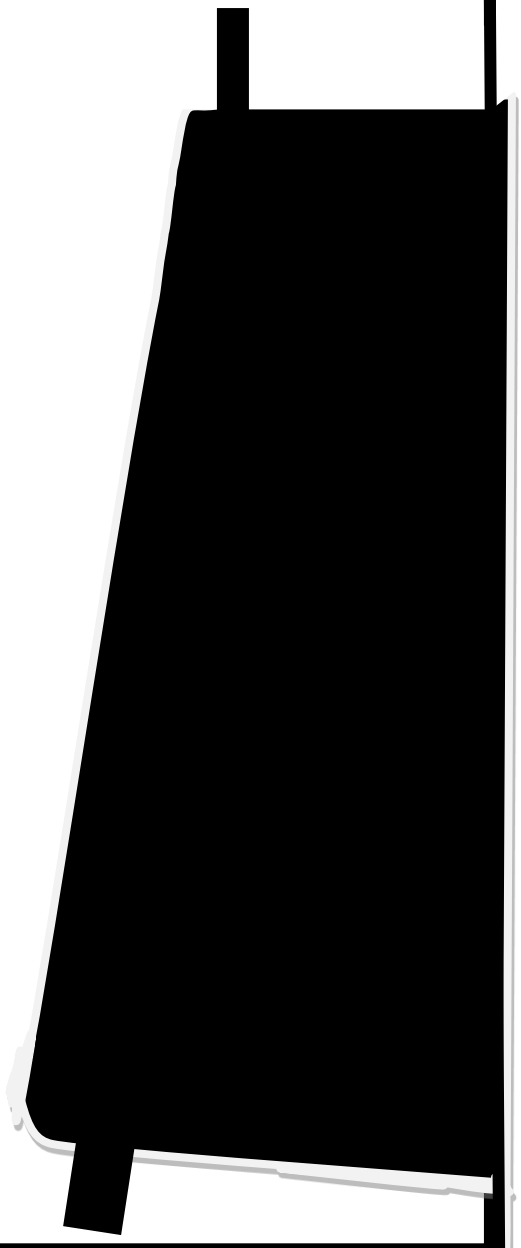

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FORWARD

The National Commission for Colleges of Education (NCCE), Abuja was established by Decree No.3 of 1989 later amended by Act No.12 of 1993. The Decree mandated the Commission among other functions to make recommendation to the Federal Government on National Policy necessary for the development of Teacher Education in Nigeria. Over the years, the Commission has been pursuing the mandate through Accreditation, Monitoring and Evaluation, Conduct of Researches on Teacher Education, Considering Research Fund for the Commission and Colleges of Education and Undertaking Periodic Reviews of Teacher Education Policies. In addition to these, is also the very important aspect of information dissemination on teacher education and this is where the Nigerian Teacher Today Journal (TNTT) comes in. The aim of the Journal is to compliment the Commissions' effort in promoting academic researches and dissemination of research findings on Teacher Education by the academia.

The TNTT Journal was founded in 1991, and so far 19 Volumes of the Journal have been published since inception. It is my pleasure to present this 20th Volume to the general public. A total of sixteen (16) articles comprising papers from seasoned academics covering diverse areas in Teacher Education which promises to be of a highly enriching contribution to the academic world. Members of the editorial team are highly appreciated for their continued commitment and professional assessments of the articles considered worthy of inclusion in the current edition.

This publication promises to be of inspiring document for further researches and policy development. I therefore urge the general public and the academia to take full advantage of this publication and make use of them in their various endeavor.

Thank you.

Prof. Paulinus Chijioke Okwelle, *MNAE*
Executive Secretary

NOTES TO CONTRIBUTORS

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1. Articles should not exceed 15 pages in length. They must be typewritten, double-spaced on one side only and on A4 paper. Author's name and address, plus a short biographical note, should be typed on a separate sheet and attached to the articles.

2. Articles should be headed by an abstract of not more than 200 words.

3. Tables and figures should be kept to the barest minimum.

4. Quoted passages of more than three typed lines should be extracted: Indented 5 spaces and typed single-spaced. Shorter quotations should be enclosed in single inverted commas.

5. Footnotes are not permitted. The Journal follows the author/date system of citation, by which reference is made in the text by citing the author's surname and date of publication of the work. (APA 7th Edition guidelines).

   For example
   It has been argued (Ibrahim, 2011) …
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Okeke, A. N. (1979); Organising Resources for Education, in B.O. Ukeje (ed.), *Foundations of Education*, Benin City: Ethiope Publishing Company.

8. Authors of main articles will receive one complimentary copy of the Journal upon publication.

9. All articles submitted must be accompanied with electronic or soft copies.
Failure to submit articles in the correct style may result in rejection.

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Preliminary Pages

THE IMPORTANCE OF ARTIFICIAL INTELLIGENCE (AI) IN THE ADVANCEMENT OF TEACHER EDUCATION PROGRAMMES IN NIGERIA

By

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Abstract

The integration of Artificial Intelligence (AI) into teacher education programs in Nigeria addresses the need for contemporary teaching skills suitable for the 21st century. This paper explores how AI enhances various facets of teacher education, such as personalized learning,student assessment, and educational research. AI-powered educational platforms offer customized learning experiences, while AI-based assessment tools enable quick identification of student struggles, allowing for targeted interventions. Furthermore, AI facilitates the analysis of large datasets in educational research, providing insights that inform teaching practices. This study employs a mixed-methods approach, combining quantitative data analysis with qualitative interviews to understand the impact of AI on teacher training. Findings indicate that AI can significantly improve the efficiency and effectiveness of teacher education programs by offering personalized training, improving lesson planning, and providing real-time feedback. The conclusions underscore the potential of AI to transform teacher education in Nigeria, emphasizing the need for investment in AI technologies and teacher training to fully realize these benefits.

Keywords: Artificial Intelligence (AI), Teacher Education, Teaching and Learning.

Introduction

Artificial intelligence is the science of making machines that can think like humans. It can do things that are considered "smart." AI technology can process large amounts of data in ways, unlike humans. The goal for AI is to be able to do things such as recognize patterns, make decisions, and judge like humans. The impact of Artificial Intelligence (AI) on teacher education is as significant as it is multi-faceted. AI has the potential to transform the way teachers are trained and how they teach students. One of the main impacts of AI on teacher education is the use of intelligent tutoring systems (ITS) which can provide personalized learning experiences for students. These systems use data analytics to analyze students` performance and provide feedback to teachers on how to tailor their instructions to meet individual student needs. The emergence of AI education as a subject places new demands on teachers, researchers, and policymakers to ensure its effective

implementation in schools,while the adoption of new curricula material necessitates state policy analysis and future needs (Sanusi, Olaleye, et al., 2022). Another impact of AI on teacher education is the use of machine learning algorithms to help teachers create more effective lesson plans. These algorithms can analyze student data and provide insights into which instructional strategies are most effective for different types of learners. AI can also improve teacher training by providing more effective professional development opportunities. For example, virtual reality simulations can allow teachers to practice teaching in realistic scenarios, while natural language processing can provide feedback on their instructional delivery. Notwithstanding that several researcher-designed curricula and resources exist to introduce the AI concept, teachers possess limited knowledge to teach AI to their students (Sanusi et al., 2021b). Having identified teachers' lack of AI knowledge as a barrier to AI implementation, studies have begun to explore the preparation of teachers to teach AI through professional development (PD) programs (Lee & Perret, 2022) and co-design of learning resources (Lin & Van Brummelen, 2021). While PD is important, exploring teachers' intention and readiness to teach AI in classrooms is imperative since teachers' acceptance and disposition could be a pointer to their interest in teaching technology and impact their teaching practices (Nikolopoulou, Gialamas, Lavidas, & Komis, 2021). Adopting course content in the classroom would be impossible without teacher buy-in (Lin & Van Brummelen, 2021). As a result, gathering teachers' perceptions of their intention and readiness to teach AI would contribute to understanding the factors that support the successful implementation of AI in schools

Furthermore, AI has the potential to help teachers identify at-risk students and intervene early to provide additional support. Machine learning algorithms can analyze student data to identify patterns that may indicate a student is struggling, allowing teachers to provide targeted interventions before a student falls behind.

Moreover, AI has the potential to transform teacher education by providing personalized learning experiences for students, helping teachers create more effective lesson plans, improving teacher training and providing early intervention for at-risk students. However, it is important to consider the ethical implications of AI in education and ensure that it is used in a responsible and equitable manner. Artificial intelligence (AI) has the potential to revolutionize education in many ways, including teacher education. With its ability to automate tasks, provide personalized learning, and generate insights from data, AI could transform the way teachers learn and teach.

One of the most significant effects of AI on teacher education is its ability to personalize learning. AI-powered platforms can analyze data on how individual students learn and provide tailored feedback and resources to meet their unique needs. This same technology could be applied to teacher education. AI could analyze data on a teacher's performance and provide personalized feedback and resources to help them improve their teaching skills. This would enable teachers to learn at their own pace and address their individual weaknesses, which could lead to more effective teaching.

AI could also help teacher education programs to better prepare teachers for the classroom. With AI-generated simulations, teachers could practice teaching in realistic scenarios before they enter the classroom. This would enable them to gain experience and confidence in a safe environment, reducing the risk of making mistakes that could harm their students' learning. AI-generated simulations could also be used to train teachers to deal with specific classroom situations, such as managing disruptive students or teaching a student with a learning disability.

Another potential benefit of AI in teacher education is the ability to automate routine tasks. Teachers spend a significant amount of time on administrative tasks, such as grading papers and managing student data. AI-powered tools could automate these tasks, freeing up teachers' time to focus on teaching and learning. For example, AI could grade multiple-choice tests and provide feedback to students, while teachers focus on providing more personalized feedback on open-ended questions. AI could also provide teachers with real-time data on their students' performance, which could help them to adjust their teaching strategies. For example, if AI detects that a student is struggling with a particular topic, it could alert the teacher, who could then provide additional support. This could lead to more effective teaching and improved learning outcomes for students.

However, there are also potential challenges associated with the integration of AI in teacher education. One challenge is the need for teachers to develop new skills to effectively use AI-powered tools. Many teachers may be hesitant to adopt new technology or may lack the necessary training to use it effectively. It is, therefore, important for teacher education programs to provide training and support to ensure that teachers are equipped with the skills they need to effectively use AI. Another challenge is the potential for AI to perpetuate existing biases. AI-powered systems rely on algorithms that are trained on data, which may contain biases. For example, if AI is used to assess a student's writing skills, it may be biased against students who speak English as a second language or who have a learning disability. It is, therefore, important to carefully design and test AI-powered tools to ensure that they are fair and unbiased.

Conceptual Framework

Artificial Intelligence in Nigerian Education: Artificial intelligence (AI) has been quite topical in recent years, and its impact on education in Nigeria is no exception. With the increasing demand for skilled professionals in the technology sector, AI has the potential to transform the educational landscape of Nigeria. AI technologies, such as user-facing services and products, are being integrated rapidly into our daily activities and have become a topic of discussion among educators (Yang, 2019; Zimmerman, 2018, p. 2018).

AI is the simulation of human intelligence processes by machines, particularly computer systems. It involves the creation of algorithms that can perform tasks that usually require human intervention. In education, AI is being used to develop smart learning systems that can personalize teaching and learning experiences for students. This technology has the potential to revolutionize the way students learn, how teachers teach, and how educational institutions operate. Many studies

have focused more on the direct relationship between AI literacy and readiness than on AI relevance and readiness (Chai et al., 2020a; Dai et al., 2020). AI literacy significantly predicted students' readiness to learn (Chai et al., 2020a)

One of the significant applications of AI in Nigerian education is the development of smart tutoring systems. These systems use AI algorithms to create personalized learning experiences for students. These systems can analyze the learning patterns of individual students and provide feedback on their progress. This technology can help students learn at their own pace, which can be beneficial for students who struggle with conventional teaching methods. Due to the rapid growth in the digitization of our daily tasks, AI education is now a crucial facilitator for future opportunities where creativity, knowledge, and the possession of relevant skills will be the key to success. So, getting a good AI education is important for the future AI workforce to be more open and diverse. Knowing how ML models the world is a type of data literacy that can help kids explore, understand, and ask questions about the data-driven systems they use every day like face recognition, smartphones, and voice recognition (Aruleba, Dada, Mienye, & Obaido, 2021).

Another area where AI is being used in Nigerian education is in the development of chatbots. These bots use natural language processing (NLP) to understand and respond to students' queries. Chatbots can provide instant feedback to students, answering questions, and providing information on demand. This technology can also help educational institutions handle administrative tasks, such as scheduling and course registration. AI is also being used in Nigerian education to develop adaptive learning systems. These systems use AI algorithms to adjust the learning experience based on the student's progress. This technology can help students learn more efficiently and effectively. By adapting to the student's learning style, the system can provide more relevant content and improve the overall learning experience.

Despite the potential benefits of AI in Nigerian education, there are also some challenges that need to be addressed. One of the significant challenges is the lack of infrastructure to support AI development. The high cost of equipment and expertise needed to develop AI systems has limited the number of institutions that can afford to invest in this technology.

Another challenge is the lack of awareness of AI's potential in education among educators, policymakers, and students. Many educational institutions in Nigeria are not aware of the benefits of AI in education, and some students may not be interested in pursuing careers in AI-related fields. Furthermore, there is a need for training and up-skilling of educators to use AI tools effectively. As AI adoption grows, educators must be equipped with the necessary skills to integrate AI into their teaching methods.

Despite these challenges, AI has the potential to revolutionize education in Nigeria. One of the significant benefits of AI in Nigerian education is the ability to personalize the learning experience for students. AI algorithms can analyze a student's learning pattern and provide customized feedback and learning resources. This technology can help students learn at their own pace, increasing their motivation to learn and improving their academic performance. Another benefit

of AI in Nigerian education is the ability to automate administrative tasks. Educational institutions can use AI-powered chatbots to handle routine administrative tasks, such as scheduling and course registration. This technology can help institutions save time and resources, allowing them to focus on delivering high-quality education. AI can also help bridge the digital divide in Nigerian education. With AI-powered learning systems, students in remote areas can access quality education without having to travel to urban centers. This technology can help improve the accessibility of education, particularly in rural areas with limited resources.

Use of AI in Colleges of Education

Artificial intelligence (AI) is a rapidly evolving technology that has the potential to transform various aspects of society, including education. In Nigeria, AI is being gradually integrated into various educational institutions, including Colleges of Education. These institutions are utilizing AI to enhance teaching, learning, and research activities. Currently, ongoing initiatives and research are being done on developing and using AI in Africa (Oyelere et al., 2022). Most of these researches have shown that most AI applications used in Africa come from other continents and thus lack contextual relevance because they do not consider things like culture and infrastructure. This concern is related to the fact that Africa has one of the lowest scores on the 2020 global Government Artificial Intelligence Readiness Index (Gwagwa, Kachidza, Siminyu, & Smith, 2021; Aruleba & Jere, 2022; Aruleba et al., 2022A).

One of the significant ways in which AI is being used in Colleges of Education in Nigeria is through personalized learning. With AI, Colleges of Education can create personalized learning paths for students, which are tailored to their individual learning styles and pace. By analyzing data on each student's academic performance, AI-powered systems can provide students with the necessary support and resources they need to succeed. As the number of AI technologies around us increases, people have had more chances to interact and work with these technologies. This has made AI part of our everyday lives, for example, Siri, smart home appliances, smartphones, Alexa, and AI in computer games (Touretzky et al., 2019)

Another area where AI is being used in Colleges of Education in Nigeria is in administrative tasks such as admissions and registration processes. AI-powered systems can automate the registration process, reducing the burden on administrative staff and ensuring accuracy and efficiency in record-keeping.

In addition, AI is being used to improve teaching and learning by providing intelligent tutoring systems that can help students learn more effectively. These systems use machine learning algorithms to understand the student's knowledge level and provide personalized feedback and guidance. The systems can also monitor the student's progress and provide feedback to the teacher, enabling them to adjust their teaching methods to better meet the student's needs.

AI is also being used to enhance research activities in Colleges of Education in Nigeria. AI-powered systems can assist researchers in processing large amounts of data and analyzing research

findings. These systems can also provide insights into patterns and relationships that may not be easily identifiable through traditional research methods.

Moreover, AI is being used to develop virtual assistants that can help students and teachers with their daily tasks. These virtual assistants can answer questions, provide information, and even grade assignments. This frees up teachers' time and enables them to focus on other tasks, such as lesson planning and student engagement.

However, the integration of AI in Colleges of Education in Nigeria is not without its challenges. One of the most significant challenges is the lack of infrastructure and resources needed to support AI implementation. The high cost of AI systems and the lack of skilled personnel to develop and maintain these systems are also major challenges. Another challenge is the potential for AI to reinforce existing biases and discrimination in the educational system. AI systems are only as good as the data they are trained on. If the data is biased or discriminatory, the AI system will also be biased and discriminatory. This can result in unfair treatment of students and perpetuate inequality in education.

Benefits of AI to Teacher Education Programmes

The use of AI in Nigeria's education system can provide several benefits, including improved teaching and learning outcomes, personalized learning, and increased efficiency in educational institutions. AI can also help bridge the gap in educational inequality and improve access to quality education for all Nigerians. The following are among the benefits to teacher education in Nigeria;

i. One of the primary benefits of AI in education is its ability to personalize learning. With AI-powered learning platforms, students can receive tailored feedback and support based on their individual needs. This personalized approach can help students to learn at their own pace, identify areas where they need more assistance, and receive guidance to improve their performance.
ii. AI-powered learning platforms can also provide students with real-time feedback on their progress, which can help them to identify their strengths and weaknesses and take necessary steps to improve their performance. This feedback can be especially useful for students who struggle with traditional classroom settings and may benefit from more individualized attention.
iii. AI can also help teachers to identify students who are at risk of falling behind or struggling in particular areas. By analyzing student performance data, AI can provide insights into the specific areas where students are struggling, allowing teachers to adjust their teaching strategies and provide targeted support to those who need it most.
iv. AI can also increase efficiency in educational institutions. AI-powered systems can automate many of the administrative tasks that are time-consuming for teachers and school administrators. For example, AI can be used to automate grading, create personalized lesson plans, and generate reports on student performance.
v. AI can also help to bridge the gap in educational inequality in Nigeria. Many students in Nigeria, particularly those in rural areas, have limited access to quality education due to a

lack of resources and infrastructure. However, with AI-powered learning platforms, students can access high-quality educational resources and receive personalized support, regardless of their location.

vi. Data analytics: AI can analyse large data sets of students' performance, allowing teachers to gain valuable insights into individual student's learning patterns, strengths, and weaknesses. These insights can inform their teaching strategies and help them adapt their teaching methods to better suit individual student's needs.

vii. Virtual assistants: AI-powered virtual assistants can assist teachers with administrative tasks, such as grading and answering routine student questions. This can free up teachers' time, allowing them to focus on more meaningful interactions with their students.

viii. Smart content: AI can help create interactive and engaging educational content that adapts to the needs of individual students. Smart content can provide targeted feedback and suggestions to students, allowing them to progress at their own pace.

ix. Predictive analysis: AI can predict future student performance based on historical data, allowing teachers to intervene and provide support where necessary. This can help prevent student dropouts and ensure that all students receive the support they need to

x. AI can also help to improve access to education for students with disabilities. By providing personalized support and adaptive learning tools, AI-powered systems can help students with disabilities to overcome the challenges they face in traditional classroom settings and achieve their full potential.

Despite the potential benefits of AI in education, there are also concerns about its impact on the role of teachers and the potential for bias in AI-powered systems. Some worry AI has its negative effects. Some of the concerns and limitations include:

1. _Job displacement_: AI automation can lead to job losses in certain sectors.

2. _Bias and discrimination_: AI systems can perpetuate and amplify existing biases if trained on biased data.

3. _Privacy concerns_: AI can compromise personal privacy through surveillance and data collection.

4. _Security risks_: AI systems can be vulnerable to cyber attacks and hacking.

5. _Dependence and loss of human skills_: Over-reliance on AI can lead to a decline in human skills and critical thinking.

6. _Unintended consequences_: AI decision-making can have unforeseen effects, such as in autonomous vehicles or medical diagnosis.

7. _Lack of transparency and accountability_: AI decision-making processes can be difficult to understand and trace.

8. _Environmental impact_: Training large AI models can consume significant computational resources and energy.

9. _Misinformation and disinformation_: AI-generated content can spread false information.

10. _Existential risks_: Some experts worry about the potential for super-intelligent AI to pose an existential risk to humanity.

It's essential to acknowledge and address these concerns as AI continues to evolve and integrate into our lives.

To address these concerns, it is essential to ensure that AI is used in a responsible and ethical manner in education. This includes ensuring that AI-powered systems are transparent, accountable, and unbiased. It also requires investing in the training and development of teachers to ensure that they have the skills and knowledge necessary to effectively use AI-powered tools in the classroom.

Conclusion

Overall, AI has the potential to transform education in Nigeria by improving the quality of learning experiences, increasing accessibility, and providing personalized support to learners. With the right investment and support, AI could help to bridge the education gap and prepare Nigerian students for the challenges of the future. Identifying teachers' lack of knowledge as a barrier to AI instructional facilitation is a step toward ensuring wide adoption in schools. More importantly is the understanding of teachers' readiness and their intention towards AI curriculum since this could be an essential factor to teaching AI. Studies that specifically investigate teachers' readiness and intention to teach AI has not been found in existing literature. Thus, this study contributes to the literature on factors influencing teachers' readiness and behavioral intention regarding AI instruction in K-12 educational context (Nigeria 6+3+3 system of primary-secondary education. . The variables involved in understanding teachers' readiness and intention towards AI teaching as identified in this study include AI anxiety, perceived usefulness, social good, attitude, confidence, and AI relevance (Chai et al., 2021).

References

Agresti, A. (2016). *Categorical data analysis. Statistical Papers, 57, 849–850.Assessed from https://doi. org/10.1007/s00362-015-0733-8*

Aruleba, K., Dada, O. A., Mienye, I. D., & Obaido, G. (2021). *Demography of machine learning education within the K12. In International conference on innovations in bio inspired computing and applications (pp. 467–474). Cham: Springer.*

Aruleba, K., & Jere, N. (2022). *Exploring digital transforming challenges in rural areas of South Africa through a systematic review of empirical studies. Scientific African, Article e01190.*

Aruleba, K., Jere, N., & Matarirano, O. (2022 A). *An evaluation of technology adoption during remote teaching and learning at tertiary institution by gender. IEEE Transactions on Computational Social Systems.*

Aruleba, K., Jere, N., & Matarirano, O. (2022 B). *Technology adoption readiness in disadvantaged universities during COVID-19 pandemic in South Africa. International Journal of Higher Education, 11(2).*

Bishop, F., Zimmermann, J., Pfeil, U., Sanderson, G., Reiterer, H., & Hinrichs, U. (2019). Construct-a-vis: *Exploring the free- form visualisation processes of children. IEEE Transactions on Visualization and Computer Graphics, 26(1), 451–460.*

Chai, C. S., Wang, X., & Xu, C. (2020). *An extended theory of planned behavior for modelling Chinese secondary school students' intention to learn artificial intelligence. Mathematics, 8(11), 1–18.assesses from https://doi.org/10.3390/math8112089 (2020)*

Chai, C. S., Lin, P. Y., Jong, M. S. Y., Guo, Y., & Qin, J. (2020). *Promoting students' well-being by developing their readiness for the artificial intelligence age. Sustainability, 12(16), 1–15. https://doi.org/10.3390/su12166597*

Gwagwa, A., Kachidza, P., Siminyu, K., & Smith, M. (2021). *Responsible artificial intelligence in sub- saharan Africa: Landscape and general state of play. AI4D Africa.2021-02-14*

Lee, M. C. (2010). *Explaining and predicting users' continuance intention toward elearning: An extension of the expectation-confirmation model. Computers & Education, 54(2), 506–516. https://doi.org/10.1016/j.compedu.2009.09.002*

Lin, P., & Van Brummelen, J. (2021). Engaging teachers to Co-design integrated AI curriculum for K-12 classrooms. In Proceedings of the 2021 CHI conference on human factors in computing systems (pp. 1–12).

Nikolopoulou, K., Gialamas, V., Lavidas, K., & Komis, V. (2021). Teachers' readiness to adopt mobile learning in classrooms: A study in Greece. Technology, Knowledge and Learning, 26(1), 53–77.

Oyelere, S. S., Sanusi, I. T., Agbo, F. J., Oyelere, A. S., Omidiora, J. O., Adewumi, A. E., et al. (2022). *Artificial intelligence in african schools: Towards a Contextualized approach. In 2022 IEEE global engineering education conference* (EDUCON) (pp. 1577–1582). IEEE.

Sanusi, I. T., Oyelere, S. S., & Omidiora, J. O. (2022). *Exploring teachers' preconceptions of teaching machine learning in high school: A preliminary insight from Africa. Computers and Education.*

Touretzky, D., Christina, G. M. C., Breazeal, C., Martin, F., & Seehorn, D. (2019). *A year in K-12 AI education. AI Magazine, 40(4), 88–90, 2019.*

Yang, X. (2019). *Accelerated move for AI education in China. ECNU Review of Education, 2(3), 347–352, 2019.*

TRANSFORMING THE *AL'MAJIRI* WAY OF LEARNING TO A FORMAL AND MODEL SCHOOL SYSTEM: GOVERNMENT EFFORT AND THE WAY FORWARD

By

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Abstract
This study examines the Integration of Qur'anic School System into Formal Education in Gombe State, Nigeria. The study was guided by three research questions and conducted using Simple Random Sampling (SRS) Technique. The method was found to be appropriate because of its flexibility in the use of sample when the population is large. The population of the study was made up of all Almajiris, their teachers and parents in 11 Local Government Areas of Gombe State. A total of 140 Almajiris schools (tsangaya), 8,440 Almajiris, 140 teachers and 1,448 parents in Gombe State were used in this study. A Simple Random Sampling (SRS) technique was used to select 32 Almajiri schools which represent 23% of the Almajiris schools, 1875 Almajiris representing 22% and 299 parents' represents 21% of the population from the eleven (11) Local Governments were considered for the study, The data collected was analyzed using SPSS Statistical package, Frequencies and descriptive statistics (percentages) were used to answer the research questions. Findings of the study showed that the Almajiris, Parent and Teachers are all in support of the model of integrating Qur'anic education into formal education system in Gombe State. The major recommendations are that the Almajiris should be provided with opportunities to be educated by the Government and non-governmental organizations. This can be achieved by developing the acceptable models of integrating Almajiris educating system into the formal system of education. Almajiris should be encouraged by making the education completely free. That is, the FGN and Gombe State Government should provide free tuition, uniform, textbooks and free lunch to all school children. This will help the Almajiris to integrate better. Lastly, food supply to the integrated school should be adequate, regular and the school environments should be made more convenient and conducive for learning.

Keywords: Transforming Almajiri School System, Integration, Formal and Model School system, way forward.

Introduction

Al'majiri (n) is a Hausa word derived from Arabic word *Al'muhajirun*, referring to people who believe in Islam and emigrate to an Islamic state or society for the purpose of studying Islamic Knowledge. (*Pl. Al'majirai*) They are usually children (pupils) of very young age between 4-6 years that moves around with their teacher (an Islamic scholar). The Almajiri education system is justified on the premise that Islam encourages its entire adherent to learn the holy Qur'an by heart and seek for knowledge; this can be found in many hadith of Prophet Muhammad (ﷺ). In a collection of Hadith in Al-tirmidhi it was reported that Prophet Muhammad (ﷺ) says *"that the search for knowledge is obligatory to every Muslim"* (Ibn Mājah 224), in another hadith collection by Bukhari & Muslim reports that prophet Muhammad (ﷺ) says *"seek out for knowledge even if it's in the farthest city"*

In the quest for knowledge the prophet made no distinction between sex, age, race or status. The prophet is the first to have thought his companions the recitation of the holy Qur'an and other religious duties.

No nation in the world today can achieve greatness if its youth cannot access quality education. This is more understandable in today's knowledge-driven world. Education denotes the method by which a society hands down from one generation to the next its knowledge, culture and values. The individual being educated develop physically, mentally and socially (Pyke, 2007). Education is present in all communities and societies. It could be formal or informal. The societal norms, beliefs, culture and technology are passed from one generation to the next through education (Garba, 2008).

With the firm establishment of Islam in the Northern Nigeria and some part of southern cities of Oyo, Ibadan and Lagos for over 500 years, eminent scholars (Ulamas) and Emirs who serve as political and spiritual leaders of their people and staunch guardians of Islamic theology, philosophy and jurisprudence, declined any local or foreign interference with their religion. It was not surprising, therefore, the advent of Christianity in Nigeria in 1842 caused a head-on collision with Islam, especially in the North where it was more firmly established (Fafunwa, 1995).

The beginning of formal education in Nigeria especially in the North did not start without some challenges. With the proclamation of Northern Nigeria on 27th December 1899, Sir Lugard who was appointed High Commissioner then prepared three 'civilizing' agents for the North. These agents according to Fafunwa (1995) were Christianity, commerce and colonialism and subsequently formed an alliance at Lokoja to open up to the northern territories, particularly against Kano, Katsina and Sokoto. The permission sought and received from Lord Lugard to penetrate Hausa land was resisted by the Emirs especially, Kano (Fafunwa, 1995).

Historically, schools for Qur'anic knowledge originated with Prophet Muhammad (ﷺ) when he started spreading his message mission in 609CA; inviting interested audience of his preaching to a house, popularly known as *DARUL-ARQAM* to hear and memorize the message of the Qur'an. That was in effect, the beginning of Qur'anic school the world over (Lemu, 2003). Fafunwa (1995)

revealed that the establishment of the Qur'anic school system pre-dated colonial era and that Islam was first introduced in Nigeria in the 11th century A.D through the ancient Kanem-Bornu Empire, by the 15th century, Islam had been firmly established in Kano, Katsina, Sokoto, east-africa.

With several educational reforms down the line, after independence, the Nigerian state in the early 1970s took over private and religious schools from individuals, religions groups and communities as education was considered to be government venture and not a private enterprise. However, despite the decision to take over the running of schools and other efforts to operate some Qur'anic schools in Northern Nigeria have continued to operate outside the purview of the state by enrolling more pupils of primary school age than western-styled schools (Nasir 2008). National level strategy by the state in 1999 re-introduced a free and compulsory western-styled education program for primary and junior secondary school aged children (UBEC. 2012b). The main aim of the program is to ensure smooth transition from primary school to junior secondary school and for learners to remain in school long enough to acquire basic life skills (Moja 2000). Since the implementation of the program enrolment rates have appreciated, but still the groups of Almajiri children were not included and continue to suffer the disadvantages in the policy.

Statement of the Problem

The *Almajiri* are just like other children from families brought to learn the Qur'an under the watchful eyes of *Mallams* (Islamic teachers). Some student (Almajiris) dropout along the way without fully acquiring the knowledge that the system is providing, and sometimes become a problem to the society. Most pupils withdraw due to hardship that is encountered during the training. They have not only become a source of concern to Islam and their parents but the society at large. Hence they are seen on streets begging for alms and food, and at the end of the day go back to their camps to sleep. They come across various kinds of dangerous juvenile and adolescent peer.

Over the years the researchers has observed with the nature and manner at which the Almajiri system operates in Gombe State which is not conducive to learning. The Almajiri learn under the tree, with no feeding schedule and without uniforms. This situation is not ideal for the education of the child in the 21st century. It is in view of this high proportion of Almajiri children in Qur'anic schools and in recognition of their contribution to raising the literacy levels and providing moral training, that there is the urgent need for government involvement in the integration and transformation of the Almajiri schools with the conventional schools not only to increase access but also for the rapid development of a large part of the nations' manpower resource (Northern Education Research Project, 2000). The limited existing data have showed that children are increasingly abused as child militants in the various recent communal conflicts and episodes of mass violence across the country. This includes the use of the Almajiri and young but radicalized religious fundamentalists (e.g., the Boko Haram) in the North child militias in the Niger Delta, "Area Boys" in the Lagos area, and young political thugs mostly evident during elections and related violence across the country (UNICEF, 2007). It is against this background that the

researcher intends to carry out this study with a view to establish the integration of Qur'anic school system into formal education system in Gombe State and come out with relevant suggestions that will enable the government and the society to address these problems and proffer solutions.

Emerging Issues, Challenges and Threats;

There are several challenges and threats regarding the Almajiri system of education, some of these challenges are:

- The near total destruction of the system of education by colonialism and the lack of interest by the postcolonial leadership to effectively address the issue, thus the Almajiri pupils are increasingly transformed into beggars and this in turn has diminished the prime purpose for which the Almajiri schools were established;
- Despite being educated still the communities do not regard them as civil educated on the basis or stigmatization that they can't speak English or dress cooperate;
- The misunderstanding deliberate or non-deliberate of the Almajiri system, equating it with producing rebellious youth with radical ideas of challenging constituted authority;
- The collapse of the *Tsangaya* system of education, especially from 1970s due to the emergence of a lot of modernized Islamic schools, mostly organized along the lines of western education, the *Islamiyya* schools receive funding from the government through the state office of the bureau for Islamic affairs.
- Lack of support from the Government, in almost all the Almajiri schools pupils sit on bare floor since the schools cannot even afford mats for them. And terrible poor health condition.
- The *Almajiri's* are turned into beggars, hawkers, and wanderers with little chances of learning the Qur'an and hadith, the primary reason for which they were sent to the Almajiri schools by their parent.

Purpose of the Study

The primary objective of this study is to establish the integration of Qur'anic school system into formal education in Gombe State of Nigeria. The secondary objectives are:

i. To examine the perception of the Almajiri, parents and teachers on the integration of Almajiri system of education into formal education system.
ii. To investigate the perception of the Almajiris, parents and teachers on the need for establishing a model Almajiri School in a different location outside the original location as a means of integrating Almajiri system of education into formal education system.
iii. Examine the perception of the Almajiris, parents, teachers, and community on the integration of Qur'anic education into curriculum of basic education.

Government Interventions in Transforming the Almajiri Education System;

President Goodluck Jonathan, the former President of Nigeria, initiated several programs aimed at improving the Almajiri education system in the country. During his presidency, Goodluck Jonathan recognized the need to address the challenges faced by Almajiri children, such as lack of

access to quality education, poverty, and vulnerability to radicalization. He launched the Almajiri Education Program, which aimed to integrate Qur'anic education with formal education, providing basic literacy and numeracy skills to Almajiri children.
The program involved building special schools known as Almajiri Model Schools, equipped with modern facilities and qualified teachers. These schools aimed to provide both Islamic and Western education, ensuring that Almajiri children receive a well-rounded education.

President Jonathan in his remark on the Almajiri "Some of them can even memorize the Qur'an as voluminous as the Qur'an is, and for someone to memorize the Qur'an and you say that person is not educated, you are not telling the truth''.

"They (Almajirai) felt that they are educated but still rejected by the society, that even their local government council cannot employ them even as messengers because they don't have any element of Western education attached to the Qur'anic education.

"That is why the Federal Government said we must assist the states, that this young people must be encouraged to study Islamic education but in addition to the Islamic education, we are not going to remove anything from it, they should also take some parts of Western education, so that when they finished at that level they can go on to study other things like Engineering, Medicine.
"That was what motivated us to go into Almajiri education," he said.

The Almajiri model schools were established in the Northern states such as Bauchi, Yobe, Jigawa, Borno, Adamawa, Gombe, and Kano States etc. as an effort to curb the begging and improved the Almajiri lifestyle.

During President Muhammadu Buhari, his administration did not relent but tried very much to see to the improvement of the Almajiri education, thus leading to the establishment of The Almajiri Commission. The Commission was established in 2019 by the Nigerian government to provide a framework for the integration of the Almajiri system with formal education, as well as to address issues such as poverty, child begging, and vulnerability to radicalization that are associated with the system. FGN (2019).

Failures and Challenges in Sustaining the Almajiri Model Education System
The Almajiri school system is a traditional Islamic education system in Northern Nigeria, However, Government makes several efforts in enhancing and improving the system but the system faced several challenges and failures in sustaining it. Some of these failures include:

i. The recently model schools build by Jonathan administration were poorly equipped and not handed over directly to the Almajiris in-need, but to state government mishandled the aim of the project.

ii. Lack of training on their Teachers (Mallam); the government did not engage to train the Almajiris teachers in any form of civil or model way of learning, rather they left them with their old method and syllabuses;

iii. There was no any minimum standard or modules provided for the Almajiri teacher to be used as a guide to teach and educate the Almajiris, they were left to the mercy of their teachers' knowledge.

iv. Lack of infrastructure: Many Almajiri schools lack basic facilities such as classrooms, proper sanitation, and adequate accommodation for the students. The government has failed to provide the necessary infrastructure to support the system.

v. Poor quality of education: The Almajiri system often focuses solely on Qur'anic education, neglecting other important subjects like mathematics, science, and English. This limits the opportunities for Almajiri students in gaining broader education and future employment prospects.

vi. Neglect of welfare: Almajiri students often live in poor conditions, facing issues like inadequate food, shelter, and healthcare. The government has failed to address their welfare needs and provide necessary support.

vii. Lack of regulation: The Almajiri system is largely unregulated, leading to issues such as child abuse, exploitation, and vulnerability to radicalization. The government has failed to establish proper regulations and monitoring mechanisms to address these concerns.

viii. Insufficient funding: The government faile to allocate sufficient funds to support the Almajiri system, resulting in a lack of resources for teachers' salaries, school supplies, and overall development of the system.

Methodology: Design of the Study

This study was conducted using Simple Random Sampling (SRS) Technique. The method was found to be appropriate for the study because of its flexibility in the use of sample when the population is large. The research used multi-stage sampling procedure of schools and Almajiri, Parents and Teachers, as respondents which were considered as representation of the population for the study.

Research Questions

The following research questions were postulated to facilitate this study:

1. What is the perception of the Almajiris, parents and teachers on the integration of Qur'anic schools into formal education system?

2. What is the perception of the Almajiris, parents and teachers on the establishment of model Qur'anic schools different from its original location as a means of integrating Qur'anic education into formal education system?
3. What is the perception of the Almajiris, parents and teachers on the integration of basic education into the curriculum of Qur'anic education?

Population and Sample

The population of the study was made up of all Almajiris, their teachers and parents in 11 Local Government Areas of Gombe State. A total of 140 Almajiris schools, 8,440 Almajiris, 140 teachers and 1,448 parents in Gombe State used in this study.

In selecting teachers for the survey, Simple Random Sampling (SRS) technique was used to select 1875 Almajiris representing 22% and 299 parents representing 21% from 32 Almajiri schools which represent 23%, the eleven local government in the respectively were considered.

Instrumentation

The instrument used in conducting this study was an interview questions designed by the researcher, which had a definite set of questions and predetermined order of asking. This type of interview was a face to face interpersonal role situation in which the researcher asked respondents questions that were responded verbally, this allowed the researcher to obtain first-hand information about a respondents' perception of the integration of Almajiri system into the formal system of education.

The responses are rated on the 4 point rating scale of agreement or disagreement. The scale ranges are Strongly Agree, Agree, Disagree and Strongly Disagree. To validate the instrument, a pilot test was carried out using two Secondary Schools in the State. This has assisted in identifying areas of weaknesses in the instrument which were addressed. During the pilot-test, the instrument was administered to 100 Almajiris, 10 teachers (Mallam) and 10 parents. To establish the reliability of the research instrument, the split half method of spearman brown formula was used, which yielded reliability coefficient of internal consistency index of 0.82 at significant level of $\alpha = 0.05$. Consequently, the instrument was adjudged to be reliable for use. This is in line with Akuezuilo (1993) that a correlation close to one (1) is more appropriate for this type of instrumentation.

Data Analysis

The data was collected and analyzed using SPSS Statistical software. Frequencies and descriptive statistics (percentage) to answer the research questions were considered. Responses of the questionnaire items were rated based on the 4 point scale to ascertain the extent to which a response was judged to be Strongly Agree, Agree, Disagree and Strongly Disagree, high percentage was considered.

Result

Research Question 1: What is the perception of the Almajiris, their parents and teachers on the integration of Qur'anic schools into formal education system?

Table 1: Descriptive Statistics of Almajiris, their Parents and Teachers on the Integration of Qur'anic Schools into formal education system

Statement	Variables	Responses				
		SA	A	D	SD	Total
The integration of traditional Qur'anic schools within its original location as a means of integrating Almajiri education into formal education system is a good idea.	Almajiris	940 (50)	575 (31)	260 (14)	100 (5)	1875 (100)
	Parents	101 (34)	92 (31)	95 (32)	11 (3)	299 (100)
	Teachers	13 (41)	9 (28)	6 (19)	4 (12)	32 (100)

Source: Field work 2022

Table 1: Revealed the findings on the responses of perception of the Almajiris, their parents and teachers on the integration of Qur'anic schools into formal education system. The results show that 940 (50%) and 575 (31%) of the Almajiris Strongly Agree and Agree that, the integration of traditional Qur'anic schools within its original location as a means of integrating Qur'anic education into formal education system is a good idea while, 260 (14%) Disagree and 100 (5%) Strongly Disagree with the idea of integration of traditional Qur'anic schools within its original location as a means of integrating Qur'anic education into formal education system.

The Table further revealed that 101 (34%) and 92 (31%) Almajiri Parents Strongly Agree and Agree respectively that the integration of traditional Qur'anic schools within its original location as a means of integrating Qur'anic education into formal education system is a welcome development. However, 95 (32%) and 11 (3%) of the Almajiris' parents used for the study Disagree and Strongly Disagree that the integration of traditional Qur'anic schools within its original location as a means of integrating Qur'anic education into formal education system is not a good idea.

Furthermore, 13 (41%) and 9 (28%) of the Almajiris' Teachers Strongly Agree and Agree that the integration of traditional Qur'anic schools within its original location as a means of integrating Qur'anic education into formal education system is a good idea while 6 (19%) and 4 (12%) of the Almajiris' Teachers have contrary opinion that the integration of traditional Qur'anic schools within its original location as a means of integrating Qur'anic education into formal education will not work well for the system.

Generally, the findings on the three respondents, the Almajiri, their parents and teachers, it is evident that they are all in support of the model of integrating Qur'anic education into formal education system in Gombe State.

Research Question 2: What is the perception of the Almajiris, their parents and teachers on the establishment of model Qur'anic schools to serve a group of Qur'anic schools as a means of integrating Qur'anic education into formal education system?

Table 2: Descriptive Statistics of Almajiris their Parents and Teachers opinions on the Establishment of a Model Almajiri Schools

Statement	Variables	Responses				
		SA	A	D	SD	Total
The establishment of a model Almajiri schools as a means of integrating Almajiri education into formal education system is a good idea.	Almajiris	390 (21)	423 (23)	715 (38)	347 (18)	1875 (100)
	Parents	30 (10)	69 (23)	135 (45)	65 (22)	299 (100)
	Teachers	6 (18)	4 (12)	15 (46)	7 (24)	32 (100)

Source: Field work 2022

Table 2: Present findings on the establishment of a model Qur'anic schools to serve a group of Qur'anic schools as a means of integrating Qur'anic education into formal education system. The result shows that 390 (21%) and 423 (23%) respectively of the Almajiris Strongly Agree and Agree that the establishment of a model Qur'anic schools as a means of integrating Qur'anic education into formal education system is a good idea while 715 (38%) and 347 (18%) respectively of the Almajiris Disagree and Strongly Disagree that the establishment of a model Qur'anic schools as a means of integrating Qur'anic education into formal education system is not a good idea.

The Table also revealed that only 30 (10%) and 69 (23%) of the Almajiris' Parents have Strongly Agree and Agree respectively that the establishment of a model Qur'anic schools as a means of integrating Qur'anic education into formal education system is a good idea, while, 135 (45%) and 65 (22%) of the Almajiris' parents Disagree and Strongly Disagree that the establishment of a model Qur'anic schools as a means of integrating Qur'anic education into formal education system is not a good idea for the system.

The table further suggested that, 6 (18%) and 4 (12%) of the Almajiris' Teachers Strongly Agree and Agree that the establishment of a model Qur'anic schools to serve a group of Qur'anic schools as a means of integrating Qur'anic education into formal education system is a good idea. However, as much as 15 (46%) and 7 (24%) of the Almajiris' Teachers Disagree and Strongly Disagree respectively that the establishment of a model Qur'anic Almajiri schools to serve a group of Qur'anic schools as a means of integrating Qur'anic education into formal education system is not a good idea.

Therefore, from the views of the three groups of respondents, it is very clear that the Almajiris, their Parents and Teachers are not in support of establishing a model Qur'anic school to serve a group of Qur'anic schools.

Research Question 3: What is the perception of the Almajiris, parents and teachers on the integration of basic education into the curriculum of Qur'anic education?

Table 3: Descriptive Statistics of Almajiris their Parents and Teachers opinions on the Integration of Basic Education Into the curriculum of Qur'anic Schools

Statement	Variables	Responses				
		SA	**A**	**D**	**SD**	**Total**
The integration of basic education into the curriculum of established Qur'anic and Ma'ahad schools as a means of integrating Almajiri education into formal education system is a good idea.	Almajiris	879 (47)	456 (25)	423 (22)	117 (6)	1875 (100)
	Parents	93 (31)	96 (32)	75 (25)	35 (12)	299 (100)
	Teachers	9 (29)	15 (47)	4 (12)	4 (12)	32 (100)

Source: Field work 2022

From Table 3, it is explicit that as much as 879 (47%) and 456 (25%) of Almajiris Strongly Agree and Agree that the integration of basic education into the curriculum of established Qur'anic schools as a means of integrating Qur'anic education into formal education system is a welcome idea, while 423 (22%) and 117 (6%) of the Almajiris Strongly Agree and Agree that the integration of basic education into the curriculum of established Qur'anic schools as a means of integrating Qur'anic education into formal education system is not a good idea.

It is also evident in the table that 93 (31%) and 96 (32%) of Almajiris' Parents Disagree and Strongly Disagree that the integration of basic education into the curriculum of established Qur'anic schools as a means of integrating Qur'anic education into formal education system is a good idea while 75 (25%) and 35 (12%) of the Almajiris' parents Disagree and Strongly Disagree with this arrangement.

Furthermore, the result shows that as much as 9 (29%) and 15 (47%) of Almajiris' Teachers Strongly Agree and Agree that the idea of integrating a basic education into the curriculum of established Qur'anic schools which will serve as a means of integrating Qur'anic education into formal education system, while it was only 4 (12%) and 4 (12%) of the Almajiris' Teachers Disagree and Strongly Disagree with this arrangement and stated that the integration of basic education into the curriculum of established Qur'anic schools as a means of integrating Qur'anic education into formal education system is not a good idea.

Therefore, it is conclusive from the findings that the Almajiris, their Parents and Teachers are strongly in support of this model of integrating basic education into the curriculum of established Qur'anic School as a means of integrating Qur'anic education into system formal education system.

Discussion of Findings

The main objective of this study is to examine the integration of Qur'anic school system into formal education in Gombe State, Nigeria. Analysis of data revealed that Almajiris, their Parents and Teachers are in support of this idea as indicated by 81%, 65% and 69% respectively. This finding agreed with Tahir (2013) who stressed the importance, and the need to ensure the model of integrating of Qur'anic schools within its original location in place for the success of EFA. He further stressed that in achieving this, Government should make provision for construction of classrooms, offices, dormitories, boreholes and toilets.

Deduction from analysis indicated that Almajiris, their Parents and Teachers are not strongly in support of the second model of establishment of a model Qur'anic schools to serve a group of Qur'anic schools as a means of integrating Qur'anic education into formal education system as suggested by 56%, 67% and 70% respectively, This perception has disagreed with the assertion of Tahir (2013) that it is an important model that entails the establishment of a model Qur'anic school to serve a group of Qur'anic schools with the following facilities; construction of 6 classrooms with office, a store and furniture, a recitation hale and office with furniture, a block of 50 pupils dormitory with furniture, the teachers' residence and bore-hole with hand pump.

Furthermore, findings revealed that Almajiris, their Parents and Teachers are strongly in support of the third model of integration of basic education into the curriculum of established Qur'anic schools as a means of integrating Almajiri Education into formal education system as indicated by 72%, 63% and 76% respectively. This is however in accordance with essential of this model as stipulated by Tahir (2013).

Way Forward;

Improving the Almajiri education system is a complex issue that requires a multi-faceted approach. Here are some potential ways forward;

i. Integration of Almajiri schools into the formal education system: This involves integrating the Almajiri schools with the mainstream education system both at federal and state level, providing them with quality teachers, curriculum, and infrastructure. This would ensure that the Almajiri children receive a well-rounded education that includes both Islamic and secular subjects.

ii. Teacher training and capacity building: Providing training and support to Almajiri teachers can greatly improve the quality of education they deliver. This includes training them on modern teaching methods, pedagogy, and classroom management techniques.

iii. Curriculum reform: Developing a curriculum that is relevant to the needs of Almajiri children is crucial. It should include both Islamic and secular subjects, with a focus on practical skills that can help them in their future careers.

iv. Addressing poverty and Socio-economic factors: Many Almajiri children come from impoverished backgrounds. Addressing poverty and socio-economic factors is essential to improving their education. This can be done through poverty alleviation programs, vocational training, and providing support to their families.

v. Community involvement and awareness: Engaging the local communities and religious leaders is important for the success of any reform efforts. Creating awareness about the importance of education and encouraging community participation can help change mind-sets and attitudes towards the Almajiri system.

Conclusion

In view of the findings of this study, it is clear that the Almajiris, their Parents and Teachers are in support of integration of Qur'anic schools into formal education system in Gombe State. Therefore, it should be noted that the Qur'anic system of education focused on creating a good righteous human being who worships Allah in the true sense of the term, builds up the structure of their earthly life according to the sharia injunctions. Therefore, integration of Qur'anic system into formal education should be seen as laudable initiative and a tool for social conservation.

Recommendations

Here are a few recommendations for improving the Almajiri education system;

i. Integration of formal education: Incorporating basic literacy, numeracy, and life skills into the traditional curriculum can provide Almajiri children with a more holistic education.

ii. Improved infrastructure: Building and renovating Almajiri schools to provide better facilities, such as classrooms, libraries, clean water, sanitation, and accommodation, can significantly enhance the learning environment.

iii. Trained and qualified teachers: Providing training and support for teachers (Malams) to improve their teaching methods and ensure they have the necessary skills to deliver a well-rounded education.

iv. Collaboration with local communities: Involving local communities, parents, and religious leaders in the development and implementation of educational programs can help ensure their sustainability and cultural relevance.

v. Access to healthcare and social services: Almajiri children often lack access to healthcare and social services. Providing these services can improve their overall well-being and contribute to better educational outcomes.

vi. Government support and funding: Adequate allocation of resources and funding from the government can help address the challenges faced by the Almajiri education system and

ensure sustainable improvements, Almajiris should be encouraged by making the education completely free. That is, the Gombe State and the Federal Government should provide free tuition, uniform, textbooks and free lunch to all school children. This will help the Almajiris to integrate better.

vii. Inspectors from the Inspectorate division of the State Ministry of Education and State Universal Basic Education Board (SUBEB) should regularly pay visit to Almajiri Schools to closely monitor their activities to ensure the success of the integrated project.

References

Akuezuilo, O. (1993). *Research Methodology and Statistics.* Awka: Nuelcenti (Nig.) Publishers.

Fafunwa, B. A (1995). *History of Education in Nigeria.* Ibadan: NPS Education Publisher.

F G N (2004). *Girl Education Programme 2010 Annual Review Report.*

F.G.N (2019). Nigerian Educational Reform; *a prudential agenda on education*

Garba A. A. (2008). Educational reform in Nigeria: the Almajiri system of education. *Journal of Education Research and Development*. 3(1). 152- 155.

Lemu, S. A (2003). Historical Development of Qur'anic Schools in Nigeria: *A memorandum Presentationt the international workshop,* Abuja in Nafisatu. D.M. (2009). *Reforming the Qur'anic School system; option and Strategies Reforming on January* 6th (2012). from http://www.uimga.org.

Moja, T. (2000) 'Nigeria Education Sector Analysis: *An Analysis of Synthesis of Performance and Main Issues.' pp. 1-49. New York: World Bank.*

Nasir, M. B. (2008*).* Bridging the gap between the Qur'anic Schools and Formal basic Education through Curriculum Integration. *Journal Education and Development in Northern Nigeria*. 4(3), 15-

Northern Education Research project (2000).Report of a study of Qur'anic school in some Northern states, submitted to the Education Tax Find, Abuja. in Nastisatu

D.M. (2009).Reforming the Qur'anic school system. Options strategies Retrieved on January 6th (2012).from http://www.uimga.org.

Oludosu A. S (2003) *Arabic and Islamic Education in Nigeria in J. O. O Abiri and A. A Jekayinfa Perspectives on History of Education in Nigeria. Ilorin.*

Pyke, N. (2007). Religious Education in School. Encarta Encyclopedia.

Garba, A. (2008). Education Reform and the challenges of the Almajiri System in Kano, Journal of Education Research and Development.

Tahir, G. (2013). Daily Trust newspaper. Thursday, July 25 2013.

UBBEC (2007). *The Compulsory free Universal Basic Education Act, and Other Related Matters.*

UBEC (2012) Universal Basic Education Commission (a webpage of Universal Basic Education Commission). Accessed June, 3rd 2015 <http://ubeconline.com/about_ubec.html>.

UNICEF (2007). *Report of Survey to Document Innovative Intervention of Almajiri Child in Nigeria. UNICEF ABUJA.*

INFLUENCE OF DIGITAL SWITCH-OVER ON INSTRUCTIONAL DELIVERY OF BUSINESS EDUCATION PROGRAMME IN COLLEGES OF EDUCATION IN SOUTH-SOUTH NIGERIA

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Abstract
The study examined how digital switch-over can enhance instructional delivery of Business Education programme in Colleges of Education in South-South Nigeria. The paper employed the survey of literature to achieve the objectives. The population for the study was two hundred and fifty-one business educators in Colleges of Education in South-South, Nigeria. The populations of the study was 251 respondents taken form 6 states teaching business. The sample size of the population was 154 derived using the Taro Yamane formula. The correlation index of 0.753 was used for the reliability of the instrument. To ensure that the objectives of the study were achieved, a 15-item questionnaire with a 5-point Likert scale was used. The simple random sampling technique was applied to get the number of respondents. This was best to explain the respondents' opinions. Mean and Standard Deviation was used to test the univariate variables whereas t-test was used to test the bivariate variables at 0.05 level. The mean figures were 3.0 and above which showed a high extent response from the respondents to the questions posed. While the hypotheses were tested using t-test statistical tool at 0.05 significant level. Findings from the study showed a significant relationship between digital switch-over and instructional delivery of business education programs. The study therefore recommended that business educators should be trained on the use of these digital technologies for instructional delivery in Colleges of Education in South-South, Nigeria.

Keywords: Digital Switch-Over, Instructional Delivery, Technological Level

Introduction

Digital switch-over is everywhere and is incorporated into every aspect of the individuals live. The clarion calls for digital switch-over and instructional delivery of Business Education programme in this twenty first century is an evolving aptitude that empowers both male and female business educators, experienced and inexperienced business educators to effectively and ethically interpret information, discover meaning, design content, construct knowledge, and communicate ideas in a digitally connected world. Using online presentation platforms in teaching, makes

effective instructional delivery easy for both male and female business educators, experienced and inexperienced business educators as it ignites the possible achievement of content delivery, smart facilities for skills development and as well WhatsApp platforms in addressing educator's expectations. The application of digital switch- over resources to teaching of Business Education programme has been attributed to the expansion of online presentation platforms.

Online presentation platforms are the component of the Internet, allowing digital materials to be created, stored, interacted and accessed over the internet, (Bates, 2005). The digital switch – over encompasses the use of computer or electronic devices with Online Platforms such as Microsoft Teams, Zoom Meeting and Webinar, Google Classroom, Smart facilities and WhatsApp Platforms. The digital switch-over and instructional delivery of Business Education programme in Colleges of Education in South-South is faced with problems of producing the needed skills for the world of work; for instance, both male and female business educators, experienced and inexperienced business educators are confronted daily with the challenges of new hardware and software in Switching-Over to Digital Instructional Delivery of Business Education. It is against this background that the present study will be carried out to determine how the independent variables (digital Switch-over) with the following dimension of Microsoft teams, zoom meeting and webinar, google classroom, interactive whiteboard and WhatsApp platforms can enhance (instructional delivery of Business Education) with the following proxies, content delivery, supervision of projects, teaching practice and subject matter of content delivery, communication skills, business development skills, digital skills and addressing educators expectations.

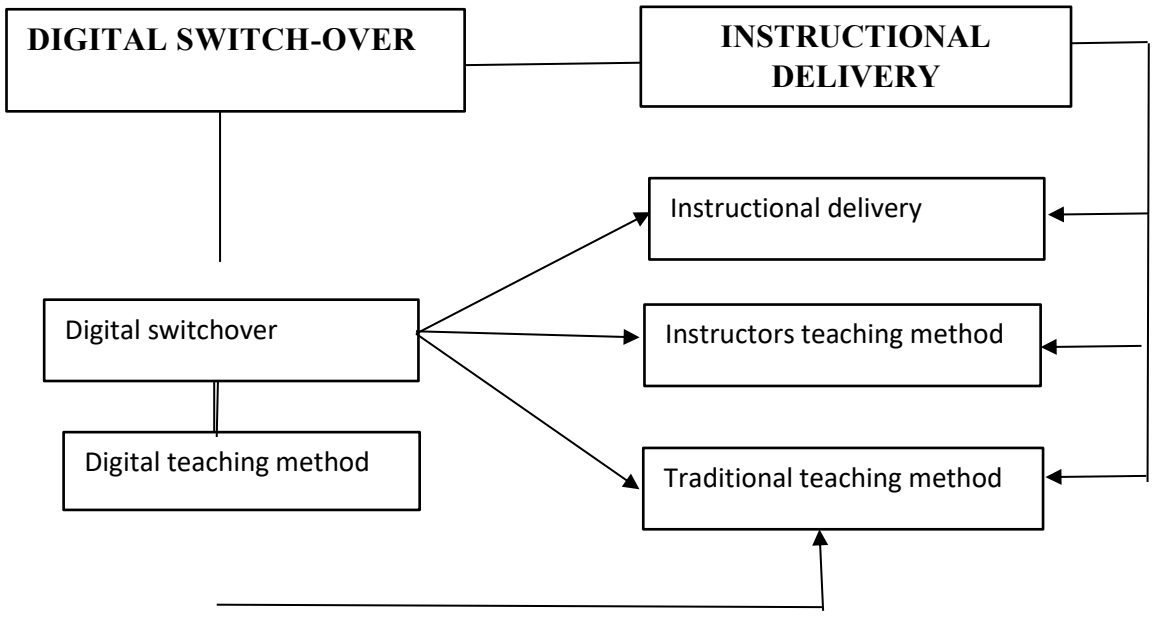
This study is apt and novel because it has not been carried out by anyone in South-South Nigeria. Therefore, this study will close the gap that exist in literature and it is going to be of great importance to all stakeholder of Business Education.

Statement of the Problem

With the shift from traditional teaching to digital delivery of instructional content in Colleges of Education, educators face new challenges in adapting to the demands of digital pedagogy, including the need for digital literacy and technological fluency effective use of education technology and the management of diverse student population. This research seeks to investigate the impact of digital switchover on instructional delivery in Colleges of Education and to identify strategies and best practices that can help educators defectively leverage digital technology to enhance students learning and engagement.

Conceptual Framework

Independent variable **Dependent variable**



Source: *Researchers conceptualization (2024)*

Objectives of the Study

The main objective of this study is to ascertain the influence of digital switch-over on instructional delivery of business education programme in Colleges of Education in south-south Nigeria. Specific objectives include;

i. To assess the relationship between technological levels of digital switch-over and instructional delivery of Business Education program in Colleges of Education, South-South Nigeria?
ii. To assess the relationship between digital switch-over and instructors teaching method of business education programs in Colleges of Education, south-south Nigeria?
iii. To assess the difference between, traditional teaching method and digital teaching method in effective delivery of business education programs in Colleges of Education, south-south Nigeria?

Research Questions

The following research questions were put forth to guide this study

i. What is the relationship between technological level of digital switch-over and instructional delivery of Business Education program in Colleges of Education, South-South Nigeria?
ii. What is the relationship between digital switch-over and instructors teaching method of

business education programs in Colleges of Education, south-south Nigeria?

iii. What is the difference between, traditional teaching method and digital teaching method in effective delivery of business education programs in Colleges of Education, south-south Nigeria?

Research Hypothesis

The following hypothesis guided this study;

Ho_1: There is no significant relationship between technological level of colleges on digital switch-over and instructional delivery of Business Education program in Colleges of Education, South- South Nigeria

Ho_2: There is no significant relationship between digital switch-over and the instructors teaching method of business education programs in Colleges of Education, south-south Nigeria

Ho_3: There is no significant difference between traditional and digital teaching method in effective delivery of business education programs in Colleges of Education, south-south Nigeria

Conceptual Clarifications

Concept of Digital Switch-Over

Digital switchover is the name given to the process of changing from analogue to digital TV broadcasting. The term 'digital broadcasting' is a catch-all term for the use of electrical signals for broadcasting that are a sequence of 'discrete numbers. Analogue broadcasting uses electrical signals that vary in a 'continuous way'. The shift from analogue to digital is an inevitable one that has taken place in virtually all electronic systems over the past decades. Digital signals are much more flexible, can be squeezed into smaller spaces, and open up many more opportunities than analogue signals. The case for making the transition is as self-evident and beneficial as was changing transport from horses to motor cars. The change could bring a great deal more channels for viewers, the option of higher quality images, multimedia, and more involving and inclusive television. Zoubi (2021).

Hunt (2021), opined that, digital television transition, also called the digital switch-over or analogue switch-off, is the process in which analog television broadcasting is converted to and replaced by digital television. This primarily involves the conversion of analogue terrestrial television to digital terrestrial. However, it also involves analogue cable conversion to digital cable, as well as analogue to digital satellite. In many countries, a simulcast service is operated where a broadcast is made available to viewers in both analog and digital at the same time. Chachua (2014), observed that, the analogue broadcasting signals we use today were developed to deliver black and white TV with mono sound. As TV got more sophisticated including the addition of colour, stereo sound and multiple channels, the signals had to be adapted to carry the extra information. TV has now evolved to such an extent that the analogue signal is no longer able to

carry the full range of features available. This is why ITU has decided that all countries have to move their TV broadcasting to a digital format which is more efficient, delivers clearer picture and sound quality, and a much richer range of features.

Wikipedia (2021), assert that, the digital television transition, also called the digital switchover (DSO), the analog switch-off (ASO), the digital migration, or the analog shutdown, is the process in which older analog television broadcasting technology is converted to and replaced by digital television. Conducted by individual nations on different schedules, this primarily involves the conversion of analog terrestrial television broadcasting infrastructure to digital terrestrial television (DTT), a major benefit being extra frequencies on the radio spectrum and lower broadcasting costs, as well as improved viewing qualities for consumers. The transition may also involve analog cable conversion to digital cable or internet protocol television, as well as analog to digital satellite television.

The Analogue Television Signals and the Digital Dividend

Omarjee (2018), describe the analogue television signal as basically, a technology from the 1940s, it is not very efficient. It uses a lot of radio spectrum, a lot of bandwidth to transmit the signal. It works fairly well, but it uses a lot of radio space, which is limited. Some spectrum is set aside for radio, TV, Wi-Fi, and Bluetooth - all these radio frequencies need space on spectrum. Analogue uses a big chunk of spectrum which is not very efficient. The International Communications Union has put forward DTT as a solution for this. This system allows for more information to be put down, using the same amount of space. For example, instead of having one channel with analogue, you can get 12 to 14 different channels in the same space with DTT. This is very valuable- because there is a shortage of spectrum and it will free up spectrum for a lot of others to use.

Figure 1: showing old analogue TV
Source: Analogue TV Stock Photos and Images

What is the digital dividend? The digital dividend is the amount of spectrum which is freed up for other things. The people most concerned about it are the mobile phone operators, they desperately need more spectrum. Also, the frequencies that TV operates in, are very good for different types of communication because the signals travel a long way and penetrate very far, they are particularly good for rural communication. Higher frequency signals do not travel very far because they get blocked by buildings easily. Low frequency signals travel further and they go through buildings more easily, very well suited for mobile phones. There's a big drive throughout the world to move away from analogue to digital for access to these frequencies.

Digital smart TV.

Figure 2: showing a digital TV

Source: Hisense (2019)

The digital TV comes with Smart features like a dedicated web browser and popular apps like YouTube and a range of movie on demands services. Playback your stored content directly on the big screen for all to enjoy via a USB device or use it to record TV programme and even pause live TV. In Clear Display when switched on, the backlit LED screen churns out images and videos with amazing contrast and details. The Hisense LED TV /brings you exceptionally vibrant and true-to-life images delivered just as the director imagined. Vibrant Sharp Colours that generates amazingly clear, razor sharp images with a resolution of FULL HD dynamic contrast ratio and 50Hz refresh rate that ensures that, the displayed images are true to life and free of motion blur.

Figure 3: mobile phone also a digital TV
Source: Hisense (2019)

This mobile phone is also a digital TV due to the fact that it uses a full seg DTV which is better in terms of clarity and functions.
Edwards (2020), saw that, digital telephony uses digital information and sound that is represented by a series of ones and zeros. Among the advantages of digital telephony are greater bandwidth (the ability to send more information at once) and a lower error rate. Digital phone calls are clearer than calls made using analog phone networks, also known as Plain Old Telephone Systems or POTS.

Voice over Internet Protocol (VoIP)
is another form of digital telephony that has become very popular. With VoIP technology, you make digital voice and video calls via the Internet. An example of a VoIP service is Skype, Microsoft Teams, zoom meetings/zoom Webinar and WhatsApp. Typically, the caller will wear a headset consisting of headphones and a microphone to make VoIP calls. The caller's voice is picked up by the microphone and converted into a stream of digital information, which is then sent across the Internet to the person receiving the call. The receiver may get the call on his own computer, on a fixed phone line or on a cell phone. VoIP technology can benefit your business by allowing you to make very cheap -- and sometimes even free -- calls.

Concept of Instructional Delivery
Ezenwafor & Nwachukwu (2020), opined that, instructional delivery is the interaction among the student, the teacher, the content, the knowledge, skills and dispositions students need for effective teaching/learning outcomes in order to qualify to work together with others in a diverse society and fast changing world. Ezenwafor & Nwachukwu (2020), in Dabbs (2012) explained that instructional delivery is an instructor's personal approach to teaching based on their own professional identity which helps to create a unique classroom culture. Instructional delivery combines the complexities of teaching with institutional expectations and student demand for quality instruction. Instructional delivery embraces all human interactive skills employed by the

teacher to promote/facilitate learning in the classroom situation thereby leading to improved performance on the part of the learner. It is a process in which teachers apply repertoire of instructional strategies to communicate and interact with the learners around academic content, and to support student engagement for better learning outcome, (Blaise, Onwuagboke, Singh, & Fook, 2015).

Instructional delivery according to Azar (2017), is to ensure that students receive instruction that is delivered effectively and in a manner that allows content mastery. Effective instructional delivery means that the teacher will build on existing knowledge, differentiate instruction, and incorporate technology into lessons. The primary goal of instructional delivery is to ensure that educators have the skills and knowledge necessary to provide students with effective instruction. The central objective of the instructional delivery standard, is determining a teacher's proficiency in the content delivery.

Instructional delivery has to do with what the teacher does to promote or direct teaching and learning in a particular subject in a school. This is done by the teacher through effective planning of the lesson by preparation of lesson notes, gathering of teaching Aids, employment of teaching strategies and timely use digital facilities to coincide with the teaching. Paulias &Young (1996) described instructional delivery as a means of guiding learners in securing the amount and quality of experience which will promote the optimum development of their potentials as human beings.

Logan & Logan cited in Agina-Obu & Onwugbuta-Enyi (2017), described instructional delivery as a creative process which involves an imaginative person, who utilizes prior experiences, combines material, methods, ideas, and media in new and existing ways which help learners integrate learning and reinforce concepts.

Instruction delivery and teaching are synonymous according to Agina-Obu & Onwugbuta-Enyi, 2017), since they require a teacher to get all the necessary things to make teaching and learning more meaningful to make a change in others so as to be more meaningful in wherever they find themselves. Okanu-Igwela & Walson (2019). To Canales & William (2020), Instructional delivery refers to a teacher's use of varied research-based instructional strategies utilized to engage students in active learning.

Cox (2015), enumerated essential teaching strategies to deliver an effective lesson, these characteristics can be used in any grade. Have an Objective, Model Your Expectations, Actively Engage your learners, Be Mobile and Compliment Positive Behavior and Hard Work: Once your lesson's objective have been met, take a moment to reflect upon what had worked and what did not in your lesson. Look for any patterns that may have come up, or try to find what you were lacking in a particular area. Similarly, Winginstitute (2021), Saw that, instructional competencies are essential practices that teachers must master for effectively teaching to enhance learners to maximize knowledge and skill acquisition.

Technological Level of Colleges

Oguzor & Opara (2011), observed that, when we compare with the developed countries, the technological levels in Colleges of Education in south – south Nigeria, are still in the infancy stage. Most learners are taught by the traditional approach and often times with the resultant effect of poor performance. Technological assisted learning provides the active participation and hands-on-experience that learners require to construct meaningful learning. Use of technological enhanced facilities has been associated with improvements in people's education, labour market prospects, and everyday lives.

Empirical Review

Reagan (2012), saw that, with all these benefits of technology, Nigeria is yet to emerge as an actor in the global scene of technological development. A lot is yet to be done individually or collectively to really encourage Nigerians to accept technology as part of their culture and not as an alien to it (Usoro Edu, 1997). Though Nigerians wholeheartedly appreciate products of technology, they are yet to change their attitude towards technology related program. For instance, technology education program, the only known means of training the needed manpower to man the different phase of Nigeria's technological sector is yet to receive priority attention from the authorities. Even the trainers and the trainees themselves involved in technology education program are no longer committed to the productive aspects of their program in order to fully develop the learners' problem-solving abilities.

Ajoku (2014), opined that, technologies in education facilitate skills and knowledge acquisition, to enhance learning opportunities and invigorates learning by making it interesting and exciting and concrete. The existence of these technologies set a pace for achieving global standards in education. In the view of Adedeji (2011), the nature and extent to which technology is being used in education is considered to be a result of synergy between 'top-down' and 'bottom up' processes. Institutes such as Colleges of Education where prospective secondary school teachers are being trained have to shift their focus from dealing with present education to that of 'future education'. This, invariably will make teachers to be prepared and encouraged for the implementation of digital switch over. He observed that, its recognized resources will differ from school to school, opportunities to create effective learning and teaching environments makes it necessary for educators to the digital switch over to web technology to enhance instructional delivery of business education.

Damkor et al (2014), saw that, the technological level revolution of digital switch-over is yet to attain that critical mass required for it to register the necessary impact in instructional delivery of business education in Colleges of Education in south- south Nigeria. To Utung et al (2018), the place of technological advancement in the social, political and economic development of a nation cannot be over-emphasized. In fact, countries that are referred to as 'developed' today, are so described because of their level of technological

advancement. This is why many of these countries have a big voice when it comes to major decisions in the affairs of the entire world. Consequently, emerging nations like Nigeria in order to take their place in the comity of nations must establish technology-oriented schools.

Methodology

The study adopted descriptive survey research design. The study covered Business Education lecturers in federal Colleges of Education in South-South Nigeria, The South -South comprises of six (6) States Namely, Edo, Delta, Bayelsa, Rivers, Akwa Ibom and Cross Rivers State. The target population for the study comprises of 251 Business Educators. The sample size of the population was 154 derived using the Taro Yamane formula. The correlation index of 0.753 was used for the reliability of the instrument. To ensure that the objectives of the study were achieved, a 12-item questionnaire with a 5-point Likert scale was used. The simple random sampling technique was applied to get the number of respondents. This was best to explain the respondents' opinions. Mean and Standard Deviation was used to test the univariate variables whereas t-test was used to test the bivariate variables at 0.05 level.

Presentation and Analysis of Data to test Hypotheses

Demographic Profile of the Respondents

The data on demography characteristics of the respondents was based on respondent's gender, highest level of education and number of years of experience.

Table 1: Demographic characteristics of the respondents

	ISSUES	FREQUENCY	PERCENT	CUMULATIVE PERCENT
1	**Gender**			
	Male	99	64.29	64.29
	Female	55	35.71	100
	Total	**154**	**100**	
2	**Highest level of education**			
	HND/B.Sc	15	9.74	9.74
	M.Sc	74	48.05	57.79
	PhD	65	42.21	**100**
	Total	**154**	**100**	
3	**Years of experience**			
	0-2	41	26.62	26.62
	3-5	49	31.82	58.44
	6-10	60	38.96	97.40
	11 and Above	4	2.59	**100**
	Total	**154**	**100**	

(Source: SPSS version 21)

On Gender, 99 respondents representing 64.29% were males while 55 respondents representing 35.71% were females. This analysis shows that most of the Colleges of Education are dominated by males' lecturers. On the Highest level of education, 15 respondents representing 9.74% had were HND/B.Sc holders. Respondents with M.Sc were 74 representing 48.05% while respondents with Ph.D were 65 representing 42.21%. From the analysis, it is observed that most of the respondents are M.Sc holders. With regards to the years' experience, 41 respondents representing 26. %26 said they have worked for up to 2years. Respondents whose who have worked for 3-5years were 49 and this represents 31.82%. Those who have worked for 6-10 years were 60 representing 38.96%. While those who have worked for 11 years and above were 4 representing 2.59%. From this analysis, majority of the respondents have worked for 6-10years.

Bivariate Relationship

Responses to Research Questions

Research question 1: What is the relationship between technological levels of digital switch-over and instructional delivery of Business Education program in Colleges of Education, South-South Nigeria?

Table 2: Relationship between Technological Level of Digital switch-over and Instructional Delivery of Business Education program in Colleges of Education

S/N	Item	VHE	HE	ME	LE	VLE	Mean	SD	Decision
1	Technological levels of colleges affects educations' digital skills	64	46	23	10	11	4.09	0.85	High extent
2	Technological levels of colleges affects digital facilities in teaching and learning with digital resources	84	30	21	10	9	4.03	0.81	High extent
3	Technological levels of colleges affects digital environment to embrace integrated technology to boost connectivity.	69	47	21	9	8	4.02	0.82	High extent
4	Technological levels of colleges affects digital environment to extend affiliated websites.	80	31	11	13	9	4.01	0.78	High extent
	Grand mean						**4.04**	**0.82**	

The result in table 2 show the relationship between technological levels of digital switch-over and instructional delivery of Business Education program in Colleges of Education, South-South Nigeria. The result shows high extent. The result for research question one shows a grand mean of 4.04 and a standard deviation of 0. 82. This implies that 'educators' digital skill is a function of the technological level of the colleges.

Research question 2: what is the relationship between digital switch-over impact and instructors teaching method of business education programs in Colleges of Education, south-south Nigeria?

Table 3: relationship between digital switch-over impact and instructors teaching method of Business Education program in Colleges of Education

S/N	Item	VHE	HE	ME	LE	VLE	Mean	SD	Decision
1	Technological levels of colleges affects educations' digital skills	64	46	23	10	11	4.09	0.85	High extent
2	Technological levels of colleges affects digital facilities in teaching and learning with digital resources	84	30	21	10	9	4.03	0.81	High extent
3	Technological levels of colleges affects digital environment to embrace integrated technology to boost connectivity.	69	47	21	9	8	4.02	0.82	High extent
4	Technological levels of colleges affects digital environment to extend affiliated websites.	80	31	11	13	9	4.01	0.78	High extent
	Grand mean						**4.15**	**0.77**	

The result in table 3 show the relationship between digital switch-over impact and instructors teaching method of Business Education program in Colleges of Education, South- South Nigeria. The result shows high extent. The result for research question two shows a grand mean of 4.15 and a standard deviation of 0.77. This implies that 'instructors' teaching method is a function of the digital switch-over.

Research question 3: what is the relationship between traditional and digital teaching method in effective for delivery of business education programs in Colleges of Education, south-south Nigeria?

Table 4: relationship between traditional and digital teaching method in effective delivery of Business Education program in Colleges of Education

S/N	Item	VHE	HE	ME	LE	VLE	Mean	SD	Decision
1	I think digital delivery method is more effective than traditional method in terms of students learning and engagement.	60	50	21	11	11	4.17	0.8	High extent
2	Digital method is more effective in assessing students learning	54	37	19	10	12	4.51	0.72	High extent
3	I believe students prefer digital method than traditional method in their studies and assignments.	69	41	20	6	10	4.46	0.79	High extent
4	There are more challenges when applying digital method on effective delivery of business education programs.	77	32	12	11	11	4.21	0.81	High extent
	Grand mean						**4.34**	**0.78**	**High extent**

The result in table 4 show the relationship between traditional and digital teaching method in effective delivery of Business Education program in Colleges of Education, South- South Nigeria. The result shows high extent. The result for research question two shows a grand mean of 4.34 and a standard deviation of 0.78. This implies that there is a significant relationship between the two methods.

Multivariate Analysis: Test of hypothesis and Decision rule

The Criterion Mean used in scoring was 3.0 which was used in summing the weighted points assigned to “very high extent" "high extent”, “Moderate Extent”, very low extent," low extent". Respectively and divided by five. i.e. (5+4+3+2+1)/5 = 3.0

Decision Point: Any grand mean value greater than or equal to 3.0 was considered “high extent while less than 3.0 was taken as “low extent”

H_{O1}: There is no significant relationship between technological level of colleges on digital switch-over and instructional delivery of Business Education program in Colleges of Education, South- South Nigeria

Technological level of colleges on digital switch-over and instructional delivery of Business Education program in Colleges of Education, South- South Nigeria.

To examine the significant relationship between Technological level of colleges on digital switch-over and instructional delivery of Business Education program in Colleges of Education, South- South Nigeria the null hypothesis H_{01} is tested as shown below

Summary of t-test of relationship between technological level of digital switch-over and instructional delivery of Business Education program in Colleges of Education, South-South Nigeria

Variables	Variables	N	Mean	SD	Df	T	P-value	Remark
Technological Level of DSO&ID	Digital switchover	80	105.32	10.80	154	-0.676	0.182	Not significant
	Instructional delivery	74	107.20	8.43				

The result in table 5 shows the summary of t-test difference between digital switchover and instructional delivery. At 0.05 significant level ($t= -0.676$, $p= 0.182$) at $p>0.05$, the null hypothesis was rejected and the alternate hypothesis accepted. This means that there is a significant relationship between digital switch over and instructional delivery in Colleges of Education in South-South, Nigeria.

H_{O2}: there is no significant relationship between digital switch-over and the instructors teaching method of business education programs in Colleges of Education, south-south Nigeria

Digital switch-over and instructors teaching method of Business Education program in Colleges of Education, South- South Nigeria.

To examine the significant relationship between digital switch-over and instructors teaching method of Business Education program in Colleges of Education, South- South Nigeria the null hypothesis H_{02} is tested as shown below.

Summary of t-test of relationship between technological level of digital switch-over and instructional delivery of Business Education program in Colleges of Education, South-South Nigeria

Variables	Variables	N	Mean	SD	Df	T	P-value	Remark
Digital switch-over & instructors teaching method	Digital switchover	94	98.56	12.5	154	-0.598	0.179	Not significant
	Instructors teaching method	59	101.71	10.22				

The result in table 6 shows the summary of t-test difference between digital switchover and instructors teaching. At 0.05 significant level (t= -0.598, p= 0.179) at p>0.05, the null hypothesis was rejected and the alternate hypothesis accepted. This means that there is a significant relationship between digital switch over and instructors teaching method in Colleges of Education in South-South, Nigeria.

Ho_3: there is no significant difference between traditional and digital teaching method in effective delivery of business education programs in Colleges of Education, south-south Nigeria

Traditional and digital teaching method in effective delivery of Business Education program in Colleges of Education, South- South Nigeria.

To examine the significant difference between traditional and digital teaching method in effective delivery of Business Education program in Colleges of Education, South- South Nigeria the null hypothesis H_{03} is tested as shown below.

Summary of t-test of difference between Traditional and Digital teaching method in effective delivery of Business Education program in Colleges of Education, South- South Nigeria.

Variables	Variables	N	Mean	SD	Df	T	P-value	Remark
Traditional and digital teaching method in effective delivery of business education programs	Traditional teaching method	68	81.22	11.59	154	-0.711	0.196	Not significant
	digital teaching method	86	116.09	14.65				

The result in table 7 shows the summary of t-test difference between traditional teaching method and digital teaching method in instructional delivery. At 0.05 significant level (t= -0.711, p= 0.196) at p>0.05, the null hypothesis was rejected and the alternate hypothesis accepted. This means that there is a significant difference between traditional teaching method and digital teaching method in instructional delivery in Colleges of Education in South-South, Nigeria.

This study is in line with the statement of Ajoku (2014) who opined that, technologies in education facilitate skill and knowledge acquisition, to enhance learning opportunities and invigorates learning by making it interesting and exciting and concrete. The existence of these technologies set a pace for achieving global standards in education and influence switching to online education. In the view of Adedeji (2011), the nature and extent to which technology is being used in education is considered to be a result of synergy between 'top-down' and 'bottom up' processes.

Conclusions

Based on the objective of the study, the following conclusion can be drawn.

Digital switch-over highly enhances instructional delivery of Business Education programme in Colleges of Education in South- South Nigeria. It also showed that the areas of instructional delivery that is greatly enhanced by digital switch-over are content delivery and supervision; skills development; and educators' expectations. It was further shown that technological levels of the colleges moderate digital switch-over of the colleges with respect to online presentation platforms, smart facilities and WhatsApp platforms in Colleges of Education in South-South Nigeria. Colleges of Education should therefore embrace full digitization of instructional delivery so as to improve the quality of the graduate been produced.

Recommendations

Based on the findings of the study, the following recommendations have been made.

1. It is recommended that business educators should be trained on the use of these digital technologies for instructional delivery in Colleges of Education in South-South, Nigeria.
2. Management of Colleges of Education must provide alternative sources power such as solar energy and generator which will prevent power outage during instructional delivery when digital technologies are been utilized.
3. Federal and State governments in collaboration with donor agencies need to provide information and communication technology facilities for the purpose of using digital technologies in instructional delivery in the various colleges.
4. Curriculum planners and developers must incorporate utilization of digital technologies in future review of business education curriculum so as to give credence to digital switch-over.
5. Special allowances should be given to educators who utilize digital technologies so as to encourage smooth migration towards digital switch-over by business educators.

References

Ajoku L I., (2014)., The Place of ICT in Teacher Preparation and Climate Change Curriculum at the Tertiary Education Level in Nigeria journal of Education and Practice ISSN 2222-1735

Adedeji T., (2011). Availability and Use of ICT in South-Western Nigeria Colleges of Education *International Multidisciplinary Journal, Ethiopia 5 (5), Serial No. 22,* ISSN 2070--0083

Azar, G., (2017). Instructional Delivery: https://azar.step.hollins.edu/instructional-delivery.

Bates, A. W., (2005). Technology, e-learning and Distance Education. Retrieved from https://www.routledge.com/Technology-e-learning-and-Distance-Education

Blaise, B., Onwuagboke. C., Singh, K. R., & Fook, F., S., (2015). Need for ICT Integration for Effective Instructional Delivery in Nigerian Colleges of Education Journal of Education and Practice ISSN 2222-1735

Canales, Y., & Williams (2020). "The Relationship Between Instructional Delivery and Student Engagement in Selected Classrooms: A Cross Case Analysis" (2020). *Dissertations, Theses, and Masters Projects.*

Chachua, D., (2014). Seven things you should know about the digital switchover https://transparency.ge/en/blog

Cox J., (2019). Technology in the Classroom: The Benefits of Smart Boardshttps://www.teachhub.com.

Damkor M, Irinyang D, J., & Haruna M., (2015). The Role of Information Communication Technology in Nigeria Educational System. International Journal of Research in Humanities and Social Studies 2(2) ISSN 2394-6288

Edwards, C., (2020). How Digital Phone Systems Work https://smallbusiness.chron.com/digital-phone-systems-work-48104.html.

Hisense TV, (2019). Smart Digital Full HD Led Tv – 2019 model https://e-spotechnologies.com.

Hunt, J., (2021). What does Digital Switchover Mean in English? https://educalingo.com/en/dic-en/digital-switchover.

Omarjee, L., (2018). Digital migration: What does it all mean? https://www.news24.com.

Paulsen T, H., & Schmidt-Crawford A.D., (2017). Enhancing Student Teacher Supervision through Hybridization: Adding e-Supervision to the Mix *Journal of Agricultural Education, 58(2).*

Reagan N. R., (2012). Technology Education: The Means to The Realization of Nigeria's Vision 2020 Global Journal of Educational Research Vol 11, No. 1.

Utung, P, Bobai D, C., & Abdullahi, M, A., (2018). Challenges and Strategies for Enhancing Quality Nigeria Certificate in Education (Technical) Programme in Kaduna State, Nigeria ATBU, Journal of science & Technology& Education (JOSTE); 6 (4).

Wikipedia, (2021). The free encyclopedia: Microsoft Teams. https://en.wikipedia.org.

Zoubi, B., (2015), What is the 'Digital Switchover' and why does it matter? IT & TELECOM https://ittelecomdigest.com.

MAGICAL REALISM AND ENVIRONMENTAL ADVOCACY IN BEN OKRI'S *''EVERY LEAF A HALLELUJAH''*

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Abstract
In the rapidly deteriorating environment, magical realism as a fictional genre offers a valuable means of representing environmental consciousness. While magical realism may seem to embody fantasy, it actually contributes significantly in understanding our reality. Environmental advocacy is necessary for both the sustenance of the environment and the human race. Humans are responsible for the environmental depletion and ecological crisis which is rapidly unfolding before us, urgently demanding a shift in perception towards our environment. This study examines the role of magical realism in advocating environmental change in Ben Okri's novel, Every Leaf a Hallelujah. Using eco-criticism as the theoretical framework, the study explores how magical realism, as a literary technique, is deployed in the novel to create a mindset shift in how humans view their environment. Through a textual analysis, it is revealed that this technique, influences the plot, characterization, settings (in time and space), language, and other aspects of the novel to highlight the relevance of the environment to humans. Particularly, there are instances where non-human objects are personified, time is disrupted, sicknesses, pestilences, harsh weather condition are used as symbols of ecological judgment, a magical flower becomes a symbol of survival, the intersection of the realms of the physical and spiritual, and other elements of magic are infused to create environmental consciousness, advocate environmental change, raise ethical issues, and influence a change in human outlook towards their environment, which is vital for their survival.

Keywords: Magical Realism, Environmental Advocacy, Eco-criticism

Introduction

The gradual collapse of the ecology has underscored the urgent need to reframe human perception towards the ecology, while much has been said, more action is required for earth's survival. The gospel of ecological sustainability is one that must continue to effect a gradual overhaul to the deteriorating environment. Indeed, the environment is experiencing a great loss. Wooster (1998) aptly puts it, the global crisis before us is not a natural consequence of how the ecosystems functions "but rather of how our ethical systems function." For humans to navigate this crisis, it is pertinent to understand our impact on nature as precisely as possible, but more importantly, to recognise those ethical ways to reform them. Merely expressing the anxiety of this global crisis is insufficient to change the state of things: "we need physical and intellectual activity to repair it," to close the wide margin which humans have created with their environment, "we need a new kind of thought, 'global reparative thinking,' an interconnectedness, interdisciplinary way of thinking and feeling" (Mazumdar 2013). This is crucial because the depletion of natural life poses an existential risk to all life forms on earth.

We need to unveil ourselves to behold the ravaging effect of rapidly advancing technology and the civilization we espouse. The neck-breaking speed of modern technological progress is a pressing concern, as the claimed "advancement" reduces natural life to a minimal existence. Environmental crises demand swift response and must be treated with utmost seriousness, as they directly impact human well-being. The fact remains that whether we come to this realization or not, "we are now engaged in an epic battle to right the balance of our earth" (Al Gore, 2006). However, we can only right our wrongs when two-thirds of humanity comes to the realization that our environment must be tended with care. A change in our outlook towards the environment will happen when we are driven by the knowledge that there is a dire danger when we neglect our role in persevering the ecology. Similar to other Eco-critics, Al Gore is convinced that the hyped modern civilisation is driving humanity to a cul de sac, a dead end. This civilisation has reeled us to a critical juncture, necessitating urgent attention to the situation at hand. It is not a fiction that the modern civilisation, once hailed by humanity, is responsible for the deteriorating environment, the current environmental crisis, and the impending catastrophes. In his book *Earth in the Balance: Ecology and the Human Spirit*, Al Gore (2006) confirms this, stating that "…modern civilization…is colliding violently with our planet's ecological system" and the height of this violence against the earth is breathtaking. It is not surprising that the harsh consequences of environmental pollution and exploitation are unleashing rapidly.

Ironically, what humans have once believed in now collides with nature, which sustains human life. In his text *Postmodernity and the Environmental Crisis*, Gare (1995) questions modern civilization, which is rapidly diminishing the state of the environment, asking, "How could this have happened? How can the central principle which has dominated civilization for two and half millennia and which has inspired that civilization to dominate the world, dissolve into nothingness..." This civilization has proven to be detrimental to natural life, causing more harm than good. We have long exploited the environment to the point that nature is extremely stripped

of its value, reduced to a material resource commodity (Heise, 2006). This mindset will ultimately create an emptiness in human life, as nature, the source of human survival, is extremely exploited. Writers, in several ways, have advocated the conservation of the natural habitat and continue to urge humans to change their attitude towards the environment. This environmental advocacy has also found its way into magical realist fiction.

Magical realism has emerged as a significant trend in advocating a sustainable development. While magical realist fiction has addressed various issues affecting our society, it has also played an important role in promoting ecological sustainability**.** According to Bowers (2004), magical realism is a mode of fictional narrative that "relies upon the presentation of real, imagined and magical elements as if they were real." This blending of fantasy and reality makes it challenging to distinguish between what is fantastic or real. Writers adopting this tradition have largely employed modernist techniques, such as disrupting linear narrative and also questioning history. Faris, in his text *Ordinary Enchantments: Magical Realism and the Demystifications of Narrative* (2004), identifies the five primary characteristics of magical realism to include: the irreducible elements of magic, unsettling doubts, the phenomenal world, merging realms, and disruptions of time, space and identity.

The origin of magical realism has long been debated by scholars. While some argue that it is associated with the marginal cultures, predominantly the literature of the colonised, others see it as a "universal aesthetic that unveils the supernatural core of the real anywhere" (Siskind, 2012). The term "magical realism" was first applied in 1925 to painting by Franz Roh in his essay "Magic Realism; Post-Expressionism". Roh believes that *Magischer Realismus*, as he termed it, describes the artistic works of the German painters who attempted to "reconcile the referentiality of impressionism with the expressionist attempt to uncover the spiritual and mystical nucleus of reality" (Siskind, 2012). A few years later, a formula as regards this concept was proposed by Massimo Bontempelli who founded the influential journal *900* (*Novecento*). Bontempelli urged European writers to tilt towards the traditional myths and archetypes in order to renovate literature. The term was introduced into Latin American literature by historian and critic Miguel Angel Austrias, who popularised it when he applied it to fiction in his1967 novel *Men of Maize*, along with Alejo Carpentier, and Arturo Uslar-Pietri. They developed this concept based on the hybrid nature of Latin American culture. Another prominent work which has also become associated with the term magical realism is the novel of Gabriel Garcia Marquez which he titled *One Hundred Years of Solitude* (1967). Bhabha (1990) argues that magical realism is "the literary language of the emergent postcolonial world." This perception of magical realism as a postcolonial reaction became popular with Salman Rushdie's *Midnight Children* (1981) and Toni Morrison's *Beloved* (1987).

The nomenclature "magical realism" is often rejected by African writers whose works bear similarities to this tradition. Their reasoning stems from the fact that the term "implies the slavish imitation of Latin American" (Cooper, 1998). Europeans writers claim to have developed the concept, creating the impression that local knowledge, beliefs, language, and rhetoric cannot

emerge from Africa. In order to dispute the stereotype that nothing new, both intellectually and spiritual, has emerged from Africa, these writers reject the term "magical realism" (as it is a Western coinage) to express their own understanding of the world. For African writers, the origin of African strand of magical realism is can be traced back to the rich oral history. The writings of early African writers such as D.O Fagunwa and Amos Tutuola, and more recent generation such as Kofi Laing, Syl Cheney-Coker, and Ben Okri, among others have been inspired by this rich history which they have experimented in their narratives.

Engaging an environmentalist fiction allows one find answers to the following questions: "How is nature represented in the novel? What role does the physical setting play in the plot of the novel? Are the values expressed in the work consistent with ecological wisdom?" (Glofelty and Fromm, 1996). The environment itself, from an ecocritical thought, is all encompassing. It extends beyond plants and animals to include all ecosystems (Ozgon and Araruguc, 2021). Ecocritical theory, which underpins this analysis, interrogates the interconnectedness between humans and nature. However, an ecocritical study would do more than analysing human interconnectedness with nature to examine ethical issues, and how humans perceive their environment. Against the backdrop of this study, this work attempts to examine magical realism as a technique in advocating change in human perception of the environment and promoting sustainable development, as foregrounded in Ben Okri's *Every Leaf a Hallelujah*.

Synopsis of Ben Okri's *Every Leaf a Hallelujah*

Mangoshi, a brave seven-year-old girl, journeys into the forest in search of a magical flower to heal her dying mother and save her entire village from its present predicament. Her village is plagued with strange sicknesses, dwindling harvest, scorching heat, and several issues. During her first journey into the forest, she encounters a series of strange happenings. Mysterious voices speak to her as she searches for the magical flower. She is fortunate to get the flower, however, she loses it on her way back due to the distracting movement of trees. A year later, Mangoshi's mother's condition worsens, and the strange happenings in her village persist. The villagers consult the Wise One, who reveals that Mangoshi is the only one who can rescue them from their current agony. Despite her mother's refusal to let her go, Mangoshi's father summons the courage to release his daughter to embark on the journey once again.

As she ventures into the dense forest, she notices a drastic change which has devastated the flora and fauna. Continuing on her movement, she encounters a dying tree which speaks to her, recalling her first visit to the forest. She shares her mission with the tree and expresses her sorrow over the present state of the forest. She is advised to move deeper into the forest so that the old and big trees will proffer a solution for her. Proceeding, she comes in contact with the Baobab Tree, which transports her to another world in time past, revealing how the magnificent the forest has once been before humans tamed it. As she returns to reality, the present time, she encounters tree cutters armed with chainsaws and other big machinery to fell more trees in the forest. Mangoshi bravely

revolts against them, saving the trees from destruction and the forest from being tamed again. In exchange for this kind act, she receives the coveted healing flower. This flower ultimately heals her mother and saves the entire village from their predicament.

Magical Realism as a Technique for Environmental Revival in Ben Okri's *Every Leaf a Hallelujah*

Environmental advocacy is a recurring theme in contemporary fiction, as humanity has not seized in ravaging other life forms on earth. In the novel understudy, the urgent need for earth's revival prompts the novelist to create a narrative whereby the forest speaks for itself, revealing the damage humans have inflicted upon it. The magical element in Okri's *Every Leaf a Hallelujah* amplifies the clamouring of the environmentalist, seeking to change our world view towards natural life. For too long, we have ravaged the forests, polluted water, depleted the ozone layer, and hunted down plants and animals that sustain life. This brutalization of natural life has persisted for years. The author, through the blend of fantasy and realism, advocates a sustainable development, where the environment and all natural life are valued and cherished.

In the novel, the plight of the forest and nature in general is vehemently lamented by the trees. The trees are portrayed as characters in the narrative. They are personified to voice out their plight to remind humans of the danger of environmental destruction. The novel emphasizes the need for a change in our worldview, as humans' destructive attitude to natural life is rapidly increasing, leading to ecological fallout. The village where Mangoshi, the main character, dwells has contributed to the destruction of their forest life, with bushes burnt down, trees countlessly felled for economic reasons, and animals hunted down for human consumption. The villagers are reminded that they have caused damage to the planetary when they start noticing changes, "their harvests grew poorer, and they had less to eat. Strange animals appeared in the village. It became scorching in the daytime. Then, people began falling ill, and no one knew where the illness came from" (Okri, 2021).

Not until their lives were at stake, the villagers never care how they treat their environment. They were woken up by the affliction which they have brought upon themselves and forced to look inward for a solution to their present condition. Metaphorically, a flower becomes the way out of the pestilence. The trees in the forest, capable of speaking their minds, express how they are treated by humans, how humans exploit and value the environment only for economic reasons. The once-thriving forest, 'was usually noisy, with bird calls, animal grunts, and the fizzing of insects', has now become too quite as most of the animals that once made it bustling have been consumed by man. During Mangoshi's first visit to the forest in search of the magical flower, the trees were scared of associating with her, doubting her intention in the forest. As the trees conversed, it was evident that they had concluded that Mangoshi was not different from other humans who were less concerned about the state of the forest. They literally assume that she has come to add to their pain. The trees have, for too long, feel exiled from existence due to human ignorance and exploitation.

However, the irony becomes the case when Mangoshi sought a magical flower which the Wise One said would rescue them from their present predicament. This fantasy is a technique which highlights the novelist's message that human survival depends on nature, including plants, animals, which humans have long rendered useless and disregarded except for economic reasons.

The situation of the villagers in the home town where Mangoshi, the little girl, lives is not far fetched from the present reality we experience. Okri personifies trees, giving them a voice to speak up against their tyrant rulers, humans. The trees discuss among themselves about Mangoshi who has come in search of the magical flower, saying, "Let us wait and see what she is made of. It has to be the right person. It will be wasted if she is not the right person" (Okri, 2021). The trees are uncertain of Mangoshi's visit to the forest, afraid to narrate their ordeal with her, as they do not know if she would value their existence. Many at times, humans have disregarded them, leaving them indifferent about Mangoshi's visit. The forest appears mystic to Mangoshi during her first visit, she is bewildered by the strange movement of trees and the whisperings. The trees had "strange look," she hears sound from the root as "she pressed her ear to the earth". Although, she is unsure of the whispering she hears, "it was as if the forest itself was trying to confuse her, for every path she took led deeper into the forest where she saw trees she had never seen before" (Okri, 2021). Her first visit to the forest ends futile, as she fails to bring home the magical flower. The mysterious forest manipulates her to losing the flower, making her question her own perception. She is thrown into doubt as a result whether all that she witnesses is real or a product of her own thoughts. Not until she arrived home, she never remember holding the magical flower.

A year after, when the trouble worsens, her mother's health rapidly deteriorate and sicknesses overwhelm the village. Pestilence pervade the entire atmosphere, reminding the people that their hope depends on the magical flower. As they make consultation, "the wise man of the village" reminds them that "only the particular flower which lived in the heart of the forest" could cure Mangoshi's mother and revive the entire village – "the same flower Mangoshi had failed to bring back the year before" (Okri, 2021). The novelist, through these scenarios, highlights the fact that humans are in trouble if they fail to retrace their steps in creating a world where the environment is placed on a high pedestal rather than being exploited. Through his character, Mangoshi's father, he makes this stern warning to humans. Mangoshi father speaks to his daughter before she visits the forest the second time in search of the magical flower. He plainly tells her that "You will see for yourself. The world has changed. We are all in trouble". The reason for this ugly remark is that "Human beings have not been good to the Earth". And this would even cause more trouble for her as she visit the enraged forest which humans have always disregarded.

In his warnings, he informs her that "The forest is not the same forest you went to before" (Okri, 2021). Within a year Mangoshi visited the forest, much has changed. Her father is aware that it would become more difficult this time for her, that the journey will be more challenging and that there is high tendency that she would get lost. However, she would only be able to survive the

adventure if she is able to bring home the flower which would not only save her dying mother but the entire village. The horrible state of the forest becomes glaring to Mangoshi as she starts her journey in search of the magical flower: “She was surprised at what she saw: the dryness, the ash of vines, the broken Earth. Trees had been uprooted, and many had been cut, and their broken trunks lay among their resplendent branches on cracked Earth” (p. 39). The imagery the writer paints in this scene provide clues in understanding the level at which our environment is being degraded.

Mangoshi symbolises a new generation, a reconciliation between the environment and the older generation that initiated the industrial and technological revolution, causing plants and animals to suffer loss. Her mother, now suffering from a severe sickness, symbolises the older generation that refuse to acknowledge the vitality of the environment and neglect the fight to sustain it. She represents the older generation that has forgotten their role in preserving and tendering the earth. Her mother acknowledges her failure to help the dying forest when it beckons on her, confessing to her daughter, “When I was your age, something called me and asked for my help. However, I did not go. I did not help” (Okri, 2021). Her environment pleads with her all her life to rescue it from its present condition, but she fails to carry out this task. Now, there is downturn in her health as strange sickness befalls her. The responsibility she has failed to carry out has been passed to her daughter who is a more recent generation. What called her when she was much younger has now called her daughter again, but she is not willing to let go of her as she is not certain of what might happen in the mystic forest.

Against all odds, Mangoshi takes up the mantle to rescue her people, who have failed to treat their environment with care. The forest she visits becomes increasingly mysterious and enraged due the level of destruction which humans have brought upon it. While in the forest, Mangoshi “felt in the air a great suffering. She heard it first as a terrible cry.” She tries to find out what it was but she “could not see where the cry was coming from. It sounded like a woman’s cry” (Okri, 2021).This mysterious happening in the forest is a metaphor for the gross despoliation which the forest has witnessed. Eventually, Mangoshi strikes a conversation with a Baobab tree, which enlightens her about the reason behind the mystical happenings she experiences. The Baobab tree transports Mangoshi to another realm where she experiences nature in its pristine state. It enlightens her about the usefulness of the trees: “We hold the earth together. We are the link between heaven and earth. We give the earth the air humans breathe…We have the healing power. We are older than the human race” (Okri, 2021). Again, Okri personifies the trees, he lends a voice them so that they can express their plight. They overtly speak their minds, making it known that humans have always been their greatest enemies, despite all the benefits they provide. The conversation between Mangoshi and a fallen tree speaks volume of the long suffering the forest has experienced. In the face of this adversity, human continue to sap every good the forest has for their benefit. The innocent Mangoshi questions the fallen tree, saying:

"…tell me what happened to you. Why are you fallen?"
"Human beings came and cut me down."
"But why?"
"To sell me and make money."
"But if they do that, there will be no forest left."
"I know. They do not know what terrible troubles they are causing."
"I am sorry this has been done to you."
"Do not be sorry. Do something. Talk to older trees. Go on into the forest."
"Thank you. I will." (Okri, 2021)

This conversation reveals the level of destruction inflicted upon the natural environment. Other instances of environmental issues are raised in the text, including the depletion of the Amazon rain forest, which provides two-third of the oxygen man needs to survive on Earth. The current state of the forest is alarming, the narrator mentions that the Amazon has now become "the most prominent tree graveyard in the world," in contrast, "Many years ago, this place had forests so vast that they filled a continent. They helped the Earth to survive. However, they have been burning and cutting down trees at such a terrible rate that there is almost no forest left" (Okri, 2021). Apart from highlighting some of the destructive things humans have done to the forest life, the novelist also mentions the fact that there are repercussions for this human carelessness. The conversation between the Baobab and Mangoshi clearly outlines the repercussions of the environment degradation on man, explicitly emphasising ecological justice:

"What will happen to the world?"
"They give the world the air that we breathe. The more people destroy them, the less air there will be for the world. Do you know what will happen if there are no trees in the world"
"There will be no human beings."
"Really?"
"Yes, human beings need trees. When they cut down forests, they are cutting down your future?"
"It is terrible! Do people not know?"
"They cannot know." Said the eldest tree, "or they would not be doing what they are doing." (Okri, 2021)

While in the other realm, which the Baobab magically transports her to, the little girl Mangoshi is exposed to a wealth of knowledge on environmental issues. Her understanding about the usefulness of trees is broadened, most especially, on the immense value of the forest to mankind.

The Baobab enlightens Mangoshi how useful the trees are and the immense contribution they bring to all life forms on earth by saying, "take me for example. Every part of me is useful. My leaves and bark are healing medicine. My fruits are nutritious. My roots can cure many unknown diseases…A tree is just like a human" (Okri, 2021). Mangoshi requests to be taken back to the human world after she has spent a couple of hours in the world of the trees. It is at this point she encounters group of men who are the enemies of the forest. She questions them saying:

> *"What are you doing?" Mangoshi asked*
> *"We have come to cut down tree," he said, pointing at the baobab*
> *"Why do you want to cut it down?"*
> *"You are a child. You do not understand these things," said the man.*
> *"I understand that you want to kill this tree for no good reason, and I will not let you." Said Mangoshi. (Okri, 2021)*

Mangoshi boldly challenges the men to stop to killing the forest life, but their leader orders her capture. As they attempt to carry Mangoshi, they encounter her magical power which leaves them in disbelieve: "The first man who touched her was so deafened by her screams that he dropped her and ran away. When she screamed she seemed twice as big". This strange girl becomes a threat to their lives, and "The tree cutters did not know what to do with this strange child who seemed to have doubled in size" (Okri, 2021). Mangoshi harnesses her mysterious power to overcome the tree cutters, protect the trees, and the entire forest. Ultimately, she receives the magical flower as a gift from the trees she had protected and is able to revive her dying mother and village from their predicament.

Conclusion

Ben Okri's *Every Leaf a Hallelujah* establishes the notion that "A tree is just like human...We are each very different" (Okri, 2021). The novel raises environmental awareness and advocates the preservation of the environment, including plants, animals, and the entire ecosystem. By blending magic and reality, the author captures the essence of our environment and urges us to rescue the dying earth from the continuous exploitation and extreme degradation. Humans are made to recognise that there are consequences to the careless despoliation of the environment. Trees are personified and also mystically represented in the novel to emphasize their importance to mankind. The text presents that there is a wide margin, a significant disconnect, between humans and their

environment, and this is exemplified through the infliction of pestilence and environmental crisis in the village where Mangoshi hails from. Metaphorically, this village represents our world which needs to redefine its ethical and cultural practices to consider the relevance of the environment to human existence. The magical flower which Mangoshi searches for represents the value that nature provides. Mangoshi herself is a symbol of a new generation of environmental advocates that must spring forth for the environment to survive and for humans to be rescued from the harsh impending environmental crisis. The plot, settings and characterization of the narrative embody magical realistic elements, deployed to advocate environmental preservation and sustenance.

References

Araruguc, M. F. (2021). An ecocritical reading of Cynan Jone's *The Long Dry*. *Journal of Narrative and Language Studies*, 9(18), 325-338.

Bhabba, H. (1990). *Nation and narration*. London: Routledge.

Bowers, M.A. (2004). *Magic(al) realism*. *The new critical idiom*. London: Routledge.

Buell, L. (2003). *Writing for an endangered World*. U.S.A: Belknap Press.

_____. (2005). *The future of environmental criticism: Environmental crisis and literary imagination*. U.K: Blackwell Publishing.

Camayd-Freixas, E. (2014). Theories of magical realism. *Critical insights: Magical realism, Salem Press,* 3(15).

Cooper, B. (1998). *Magical realism in West African fiction*. USA and Canada: Routledge.

Faris, W. B. (2004). *Ordinary enchantments: Magical realism and the remystification of narrative*. Nashville: Vandeblit University Press.

Fromm, H. & Glofelty, C. (Eds). (1996). *The Eco criticism reader: Landmarks in literary ecology*. Anthens: University of Georgia Press.

Gare, A. (1995). *Postmodernism and the environmental crisis*. U.K: Routledge.

Garrad, G. (2004). *Eco-criticism*. London and New York: Routledge.

Gore, A. (2006). *Earth in the balance: Ecology and the human spirit*. USA: Rodale Books.

Heise, U. (2006). Greening English: Recent introductions to ecocriticism. *Contemporary Literature*, 47(2), 289-298.

Matylda, F. and Mertehikian, L. (2023). An ever-expanding world literary genre: Defining magic realism on Wikepedia. *Journal of Cultural Analytics*, 8(2).

Mazumdar, M.R. (2013). Ecocriticism. *Global Research Methodology Journal*, 11(8), 1-9.

Okri, B. (2021). *Every Leaf A Hallelujah*. U.K: Head of Zeus Ltd.

Rueckert, W. (1996). An experiment in ecocriticism. In the ecocriticim reader: Landmarks in Literary Ecology. Athens and London: University of Georgia press. 105-123.

Sieber, S. (2012). *Magical realism*. *The Cambridge companion of fantasy literature*. New York: Cambridge UP.

Siskind, Mariano. (2012). *Magical realism*. The Cambridge history of postcolonial literature. U.S.A: Cambridge University Press. 833-868.

Umunc, H. (2015). The green Shakespeare: An ecocritical reading. *Journal of Hacettepe University Faculty of Letters,* 32(2), 266-276.

Wooster, Donald. (1998). *Nature's economy: A history of ecological ideas*. U.S.A: Cambridge University Press.

CHALLENGES FACING THE TEACHING AND LEARNING OF INTEGRATED SCIENCE FOR NATIONAL DEVELOPMENT: A CASE STUDY OF GOVERNMENT DAY SECONDARY SCHOOLS IN KARU LGA NASARAWA STATE

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Abstract

The position of Basic Science as the bedrock for all science subjects in the senior secondary school has led to its inclusion in the school curriculum. The researcher reviewed 14 empirical research articles on integrated science published mostly from 1995 to 2015. This paper has discussed the challenges facing its teaching in (GDSS Karu, Nasarawa state. The challenges of teaching the subject are lack of motivation of teachers, lack of interest among students, medium of instruction, and lack of infrastructure among others. Recommendations which if properly effected would enhance effective teaching of basic science are; Teachers should, as prescribed in the curriculum, take students out on field trips and excursions. To facilitate this exercise, teachers should be provided with an impress, to cover the cost of transport and other expenses. Federal and state ministries of education should ensure that every integrated science teacher attends at least one workshop or seminar every year. Moreover, in-service training be approved for many unqualified integrated science teachers in secondary schools.

Keywords: Curriculum, Infrastructure, instruction, Basic science, Integrated Science.

Introduction

Science education plays a vital role in the lives of individuals and the development of a nation scientifically and technologically (Alebiosu and Ifamuyiwa, 2008). It is widely and generally acknowledged that the gateway to the survival of a nation scientifically and technologically is scientific literacy which can only be achieved through science education. To make her citizens show interest in science education, the Nigerian government came up with a policy that 60% of the students seeking admission into the nation's Universities, Polytechnics and Colleges of Education should be admitted to science-oriented courses, while 40% of the students should be

considered for Arts and Social Science courses (Ajibola, 2008). This government's effort cannot be said to have yielded much fruits given the dwindling nature of students seeking admission into science-oriented courses in the Nation's tertiary institutions. More students appear to seek admission into art and social science courses than those of the science-oriented courses on yearly basis. Disturbed by this development, researchers in the field of science education in Nigeria embarked on series of studies to find the logic behind this development. They found that the problem stemmed from the first form of science a child comes across at the JSS (Junior Secondary School) level: that is integrated science.

Integrated science provides students sound basis for further science education study. As a result, a child that is not well grounded in integrated science at this level would not show interest in offering core science subjects (biology, chemistry and physics) at the SSS (Senior Secondary School) level which are the prerequisites for studying science-oriented courses at the Nation's tertiary Institutions. They also found that lack of qualified teachers, lack of equipment and facilities for teaching, lack of practical works, insufficient allotment of time for integrated science teaching and learning on the school time-table and poor methods of teaching are the major factors militating against the successive implementation of the core curriculum in integrated science (Afuwape and Olatoye, 2004).

The aforementioned challenges against teaching integrated science does not include non-sequential arrangement of some of the integrated science concepts in the curriculum. It is believed that if integrated science concepts are not taught from known to unknown and from simple to complex, it is likely that students might find it difficult to understand the concepts taught. This has led to the development of negative attitude towards the subject by the students, which has led to many of them not showing interest in offering core science subjects at the senior secondary school level and science-oriented courses at the Nation's tertiary institutions because of their dismal performance in integrated science examination at the Junior Secondary School Certificate Examination (JSSCE).

The purpose of this study is to look, critically, into the Challenges facing teaching and learning integrated science at the JSS level, and make some recommendations for onward improvement. It is hoped that if integrated science topics are well arranged from known to unknown, simple to complex, students at the JSS level will find integrated science interesting and this will motivate them for further study in higher science education.

The importance of integrated science in everyday life can never be overemphasized. It serves as the bedrock that provides the required training in scientific skills to meet the growing needs of society. It is the fundamental knowledge acquired through integrated science at the upper basic level that leads to the transformation of the world through dramatic advances in almost all fields including medicine, engineering, electronics and aeronautics among others (Guyana Chronicles Online, 2009). The application of scientific knowledge acquired through

integrated science, as reported by Guyana Chronicles (2009) that helped many countries like China and India to transform from poor feudal type economies to become economic and industrial power houses and in several ways compete effectively with developed countries. Integrated science is of great importance because early experiences in science help students to develop problem-solving skills that empower students to participate in an increasingly scientific and technological world (Guyana Chronicle, 2009) Integrated science is the type of science that provides unique training for students in observation, reasoning, and experiment in the different branches of science; it also helps students to develop a logical mind (Prakash, 2012). Integrated science enables students to be systematic and enables them to form an objective judgment. Integrated science, if taught according to its philosophy, equips students with the necessary introductory scientific and technological knowledge and skills necessary to build a progressive society. This forms the bedrock on which scientific and technological studies rest, Adejo and Idachaba in (Ochu & Haruna, 2014)

Perspectives on Integrated Science

Basic science formerly known as Integrated Science is the first form of science a child comes across at the secondary school level. Basic science is a core subject in the National Curriculum at the upper basic level (Kim, 2008). All students from upper basic I-III classes must offer and study the subject. Basic science is considered the bedrock of all science subjects at the senior secondary school (SSS) level. The subject prepares students at the upper basic level for the study of core science subjects (Biology, Chemistry, and physics) at the senior secondary school level (Olarewaju in Oludipe, (2012). That is why Oludipe (2012) further emphasized that for a student to be able to study single science subjects at the senior secondary level successfully; such a student has to be well grounded in Basic Science at the upper basic level. Based on this, it is generally taught as a single science subject, until in the SSS level, and then split into specialized science subjects (biology, chemistry, and physics). It is expected that those students who achieve well in integrated science should be given the opportunity to study separate science subjects at the SSS level. According to Trustees of Princeton University (2013), integrated science is a revolutionary new introductory science curriculum developed at Princeton intended for students considering a career in science. Integrated science emphasizes scientific literacy and research-oriented learning (Eyles, 2009). The subject encourages exploration of student's immediate environment. As a result, integrated science teachers continue to learn along with their students.

Theoretical Frame Work

Research by Bello (2007) has shown that the desires are not being achieved as expected. The learning environment is expected to be democratic, the activities are interactive and student-centred and the teacher facilitates the process of learning in which students are encouraged to be responsible and autonomous. Though the curriculum of integrated science specifies "hands-on" and "minds-on" activities and skill acquisition, most students are not exposed to these real

situations in the schools (FRN 2004). Emaikwu (2012), in his research, discovered that integrated science is generally taught using conventional strategy which does not follow the theories put forth by Kolb (1984) and the theory of the learning process. The problem therefore is; what are the challenges that confront the effective teaching of integrated science at the upper basic level? This directly leads to the following questions which form the basis of this discussion.

a. How did integrated science education evolve?
b. What is the importance of integrated science in everyday life?
c. What are the challenges confronting the teaching of integrated science?

Brief History of Integrated Science

In 1968, the West African Examination Council (WAEC) now West African Secondary School Certificate Examination (WASSCE) conducted the Science Teacher's Association of Nigeria (STAN) for the purpose of improving WAEC'S science syllabus. Subject Curriculum Development Committees were therefore set up to consider both the changing needs of Nigerian pupils/students and international trends in their respective subject areas and drawing on their teaching. The committees worked on separate subjects- Biology, Chemistry, and Physics. Later, another Committee was set up consisting of members of the afore-mentioned subjects to work on Integrated Science and the result of their deliberation was documented in STAN'S Curriculum Development Newsletter No. 1 which marked the beginning of Integrated Science teaching and learning in Nigeria.

Integrated Science curriculum materials were designed for the first two years in the secondary schools. These included pupils' text, workbook and Teacher's Guide. These materials were revised to meet the requirements of the National Policy on Education, i.e 6-3-3-4 education system.

The integrated science programme was initiated in 1969 by UNESCO to assist member countries in promoting scientific literacy in a unified way both at the primary and secondary levels. This brought a great awareness of science Curriculum improvement in Nigeria. A study by Chukwuneke and Chinkwenze, (2012) revealed that the scientific, vocational and technological aspects of education are not effectively implemented in the school system. Based on this, integrated science curriculum review became a necessity. This led the Federal Government of Nigeria to take the decision to introduce the 9-year of basic education and the need to attain the Millennium Development Goals (MDGs) by the year 2015 together with the need to meet the critical target for the National Economic Empowerment and Development Strategies (NEEDS), summarized as follows; value reorientation, poverty eradication, job creation, using education to empower the people among others (FRN 2004). As documented by Chukwuneke and Chinkwenze (2012), it became necessary for the existing curriculum for the upper basic level to be reviewed, restructured and realigned to fit into the 9-year basic education programme. With this, the National Council on Education (NCE) therefore in her meeting in 2005 directed the NRDC to ensure the review which also approved

the new curriculum. This restructuring and curricular review took effect in September 2007 (Duada & Udofia, 2010). It was during this restructuring and review of curricular that integrated science replaced integrated science. During this time, human rights education, family life, HIV/AIDS education, entrepreneurial skills, globalization, ICT were fused into the 9-year basic education curriculum (FRN 2004) while the following themes were fused into the Integrated Science curriculum to form the integrated science curriculum:

a) Environmental Education
b) Drug abuse education
c) Population and family life education
d) Sexually transmitted infection (STI) including HIV (FRN 2004)

Integrated science is basic training in scientific skills which are required for human survival, sustainable development, and societal transformation (Chukwuneke & Chinkwenze, 2012). Integrated science is expected to make Nigerians scientifically literate.

Challenges of Teaching Integrated Science in Secondary School

Though, integrated science has been of great value both to individuals and society globally, students have been performing poorly in the subject, especially in GDSS Karu Nasarawa State Benue State. This poor performance might be because of the following challenges;

i. The teacher as the curriculum user has been identified as the most important factor in curriculum delivery. His/her level of competence and teaching strategies is very important. It is because of this that a lot of blames on the poor performance of students in integrated science has been put on the integrated science teachers;
ii. Ogunleye (1999) and Balogun (1995) in their research gathered that teachers agreed that students should be actively involved in the teaching-learning processes, but this is not reflecting in their teaching. In most cases lecturing, note-giving, and taking predominate their lessons. Ogunleye in his study found that many science (Integrated science inclusive) teachers are deficient both in academic and professional aspects of their education. As a result, they find it difficult to facilitate integrated science students to construct their knowledge because the use of a constructivist-based strategy is time-consuming; it requires intensive planning and dedication on the part of the teacher;
iii. Many integrated science teachers cannot guide their students to apply what they learned in the classroom to real life situation. They ignore this aspect completely. It has been observed that some science teachers (integrated science) lack training in instrumentation to enable them detect and repair faulty instruments (Ogunleye, 1999).
iv. Many integrated science teachers are not yet computer literate, also Many are hardly creative in terms of exploring the environment for the purpose of identifying and using resources for teaching integrated science. Instead, they bombard these students with facts using lecture methods and overload the students with copying notes and assignments;
v. Most integrated science teachers are not dedicated to their jobs. This could be as a result of the issue of salaries. The issue of salary is a peculiar challenge, where the income is

insufficient to live reasonably, teachers are no longer motivated to teach, and some teachers lack interest in the job, which can lead some to leave the profession (Danmole, 2011).

vi. Teachers do not enjoy regular promotions when due. It is because of this that Hamza and Mohammed (2011) lamented that this situation is not supposed to be the case because of the role and importance of the teachers, especially in integrated science where good teaching should take place in order to produce quality students that could pursue higher education in future.

vii. Wasagu in Wushishi and Kubo (2011) identified some factors that pose challenges to the teachers of science (integrated science) including inadequate exposure to teaching practice, poor classroom management, and control, poor computer skills, inability to communicate effectively, lack of self-reliance, entrepreneurial skills and poor attitude to work.

viii. One of the most striking challenges in the teaching of integrated science is lack of interest in integrated science among students. It is well known that learning is an activity which the learner must personally engage (Ivowi, 1999). In order for success to be achieved, the students must develop an interest in the activity.

ix. Communication is the medium of Instruction in the teaching of integrated science. On this issue, it is observed that many science teachers cannot speak fluently or loud nor express themselves clearly. This makes students to get more confused and lose important information and consequently dislike the subject. Eriba (2004) supports this expression where he said that inexperienced teachers always sound complicated above the comprehension of the students during their lesson delivery;

x. The issue of non-availability of infrastructure in GDSS Karu is a great challenge to the teaching of integrated science at the upper basic level. The modern system of education (integrated science) in Nigeria today is the one that is to equip students with knowledge and skills to strive well in the present society. It has been reported that the present infrastructure in all levels of the education system, (upper basic level inclusive) is a mockery of Vision 2020 and Millennium Development Goals (MDGs) (Wushishi & Kubo, 2011). The authors in their report further stressed that Nigerian schools lack classrooms, laboratories, and other modern structures necessary for effective teaching and learning of integrated science concepts.

xi. Inadequate supply of infrastructures jeopardizes the effective teaching of integrated science. Insufficient supply of electricity power generation is the major problem for most of the schools, especially where there is no standby generator. Electricity that would have been used for the equipment in the laboratory or workshop for effective use of electrical equipment is not readily available (Odu, 2011).In the same vein, Aderounmu (2006) also observed that lack of facilities and teachers were some of the factors contributing to the poor performance of students in science (integrated science).

xii. Due to a lack of materials and infrastructure in Nigerian schools, it has been observed that in most schools candidates who enter for science subjects enter the laboratories only when their schools get instructions from practical examination bodies (Aderounmu, 2006). The author further lamented that even the teachers of these subjects including integrated science did not know the use of most laboratory equipment and chemicals until the practical examination.

Recommendations

This paper as stated earlier discussed some of the fundamental challenges of teaching and learning integrated science in GDSS Karu, based on the findings of this study, the researcher makes the following recommendations;

i. Time allocated for the teaching of integrated science should be increased say from 35 – 50 minutes so that the pupils will, in the end, develop the power to perceive, understand, experiment, discuss, hypothesize, and draw conclusions.
ii. Teachers should, as prescribed in the curriculum, take students out on field trips and excursions.
iii. Federal and state ministries of education should ensure that every integrated science teacher attends at least one workshop or seminar every year.
iv. Experimentation, inquiry, and functionality are the pillars of modern science education. These cannot be achieved without effective laboratory activities. It is, therefore, schools should be supplied with functional laboratories and other infrastructural facilities.
v. Integrated Science teachers must be supported by a timely supply of teachers' guides and handbooks for effective teaching of integrated science.
vi. Integrated science teachers should be highly motivated. To achieve this, prompt and regular payment of salaries and promotions when due must be ensured. This can boost their morale and cause them to produce quality students.
vii. It is vital that teachers of integrated science should increase the interest of students in science by introducing constructivist-based teaching strategies where students are exposed to construct their own knowledge. With this, students would no longer view science as something abstract but as something that should be connected to real life.
viii. The use of simple words to explain the most complex concepts during lesson delivery in integrated science should be encouraged.
ix. For effective teaching of integrated science, the use of instructional materials that are found in the learners' immediate environment should be encouraged; for this would facilitate the student to understand those concepts that seem to be complex to understand.
x. Experienced integrated science teachers should be delegated to take part during curriculum decision-making process. This would enable integrated science teachers to

see their science teaching profession as an enterprise in which they can exercise their creativity.

xi. For successful teaching of integrated science, the teachers should increase the use of out-of-school/ outdoor activities in the teaching of integrated science. This encourages exploration of the immediate environment for the teaching and learning of the subject.

xii. The federal and state governments should improve the working conditions of science teachers and upgrade the status of the teaching profession and provide appropriate incentives so as to stem the unfortunate high turnover of experienced and dedicated science teachers.

Conclusion

The position of integrated science as the bedrock for all science subjects in secondary school cannot be over-emphasized. The challenges facing the teaching of integrated science have been identified as lack of motivation of teachers, lack of interest in integrated science among students, medium of instruction and lack of infrastructure among others, the prospects of integrated science will be achieved if the following are implemented such as regular training and retraining of integrated science teachers, timely supply of teachers' guide and handbook for effective teaching of integrated science, provision of well-equipped laboratories and motivation of the integrated science teachers, through regular payment of salaries and science allowances among others.

References

Danmole, B.T. (2011). Emerging issues on the universal basic education curriculum in Nigeria. Implications for the science and technology component. *Medwell Journals 8(1),* 62 – 68 Retrieved 2014 Jul 14 from http://www.medwelljournals.com/fulltext/?doi=pjssci.2011.62.68.

Duada, D. M. & Udofia, N. (2010). Comparing the objectives, themes and sub-themes of the integrated and basic science curriculum of the junior secondary schools (JSS). *JSTAN*, *45 (1&2)*, 36-46.

Emaikwu, S.O. (2012). Assessing the relative effectiveness of three teaching methods in the measurement of student's achievement in mathematics. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS), 3 (4),* 479-486. Retrieved 2013 January 18 from jeteraps.scholarlinkresearch.org.

Eriba, J.O. (2004). Strategies for teaching integrated science in secondary schools. T.O. Oyetunde, Y.A. Mallun and C.A. Andzayi (Eds.). *The practice of teaching perspectives and strategies. A resource manual for today's teachers.* Pp 153 – 156 Jos: LECAPS Publishers.

Eyles, C. (2009). Honours integrated science program. Retrieved 2013 *September* from en.wikipedia.orgFederal Republic of Nigeria. (2004). *National policy on education (4th Edition).* Lagos. NERDC Press. Guyana Chronicle Online (2009). The vital importance of science education in today's world. Retrieved 2013 April 02 from http://guyanachronicleonline.com/site/index. php?option=com_content

Hamza, F. & Mohammed, U. (2011). Way forward for the new UBE basic science and technology curriculum. In O.S. Abanyi (ed). *STAN 52nd Annual Conference,* 125 – 133.

Ivowi, U.M.O. (1999). Sustaining students' interest in science. A perspective for curriculum instruction. *In B.B.* Akpan (Ed.). *Perspectives on education and science teaching: From the eyes of Uduogie Ivowi 34-68.* Abuja: Foremost Educational Services Limited.

Kim, C. (2008). *Poor lack of choice of sciences. Retrieved 2015*, April 4th from http://news.bbc.co.uk/l/hi/education/72455 29.stm

Kolb, D. (1984). *Experiential learning. Retrieved 2013 Feb*. 19th from http://www.en.wikipedia.org/wiki/leaarnin g_style

Ochu, A.N.O. & Haruna, P.F. (2014). Challenges and prospects of Creativity in the basic science classroom: the perception of the basic science teachers. *British Journal of Education Society and Behavioural Science. 5(2),* 237 – 243

Odu, O.K. (2011). Strategies in improving the policy and access to technology education in secondary schools in Nigeria. *International Journal of Academic Research in Business and Social Sciences 1.*184 – 192 *Retrieved 2015 April* 13 from *www.hrmars.com/journal*

Ogunleye, A.O. (1999). *Science education inNigeria: historical development curriculum reforms and research.* Lagos: Sunshine international publications Nigeria LTD.

ASSESSMENT OF THE IMPLEMENTATION OF ENTREPRENEURSHIP EDUCATION CURRICULUM IN SECONDARY SCHOOLS IN SOKOTO METROPOLIS, SOKOTO STATE, NIGERIA

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Abstract
This study assessed the implementation of Entrepreneurship Education Curriculum in Secondary Schools in Sokoto metropolis. Survey research design was adopted for the study. The population of the study was all the Secondary school teachers from the 23 secondary schools offering entrepreneurship subjects in Sokoto metropolis. Twenty three 23 teachers were randomly selected, one 1 teacher from each of the twenty three secondary schools. Three research objectives and research questions guided the study, the instrument used for data collection was a checklist constructed by the researcher titled "Entrepreneurship Curriculum Implementation Checklist" (ECIC). The instrument was validated by experts in the Department of Curriculum Studies and Educational Technology, Usmanu Danfodiyo University Sokoto. The reliability of the instrument was obtained using Pearson Product Moment Correlation with reliability coefficient of 0.70. Data collected were analyzed using frequency count and simple percentage. Findings revealed that the level of implementation of entrepreneurship curriculum in senior secondary schools in Sokoto metropolis is low, the level of availability of specialist teachers to teach the subjects is very low, and the infrastructure available for teaching the subjects are also low. It was recommended among others that Government should recruit more entrepreneurship specialist teachers, and also workshop/seminars on entrepreneurship education be organized for secondary school teachers.

Keywords: Assessment, Implementation, Entrepreneurship, Education, Curriculum.

Introduction

Education is the process of acquiring knowledge, skills, attitude, values that develop the powers of reasoning and makes one useful to oneself and to the society, It brings about permanent changes in a person's thinking and capacity to do things. Education is also a valuable asset that society uses as an instrument for economic, social and political development. Odukoya (2016) stated that the quality of education naturally determines the quality of development.

Curriculum is the totality of knowledge and student's experiences that occur through educational process. Kelly (2009) defined curriculum as all the learning which is planned and guided by the school, whether it is carried on in groups or individually, inside or outside the school. No nation can rise above its curriculum because the wealth and poverty of any nation is determined by the type and quality of curriculum they operate. The primary role of the curriculum is to interpret the values, dream and the desires of the nation. This means that the survival of a society depends upon how it addresses contemporary problems such as population growth, migration, ethnic relations, food security, poverty, crime, unemployment, drug abuse and health issues and how these are integrated into the curriculum.

The entrepreneurship skills acquired at the end of secondary school education seems inadequate to make secondary school leavers competent enough and self-reliant. Hence, they cannot contribute effectively to nation building. Inadequate entrepreneurship skills made some of the secondary school leavers to remain less creative and un-employed. This problem apparently leads some of them into different forms of crime. This paper sought to investigate and make assessment of the implementation of entrepreneurship education curriculum in secondary schools in Sokoto metropolis, Sokoto State, Nigeria with the aim of finding possible solution and eventually make recommendations based on the major findings of study.

Curriculum Implementation

Curriculum implementation entails putting the decisions reached at the development stage into practice for the purpose of realizing the objectives for which it was designed (Ogwo, 1996). Curriculum implementation according to Duru (2011) is what takes place when the teacher puts the school programme of instruction into practical use in order to achieve the general specific goals of the school. Curriculum therefore means a vehicle through which the school seeks to translate the hopes of the society into concrete reality. Here the teacher who is the curriculum implementer comes in to translate the curriculum document into operating curriculum. The teacher executes the curriculum plan using curriculum materials that have been developed for this purpose by the curriculum development agents.

Entrepreneurship Education and Nation Building

The aim of secondary education is to prepare the students for higher education and also to inculcate relevant functional entrepreneurship skills needed for poverty eradication, job creation,

wealth generation as well as strengthening of ethical, moral and civic values on the students (Adesulu, 2011). An entrepreneur refers to a person who is able to turn ideas into actions. It involves creativity, innovation and risk taking as well as the ability to plan and manage projects in order to achieve objectives.

Singh (2015) defined entrepreneurship education as the process of professional application of knowledge, attitude, skills and competences. He further stated that it is more than teaching students how to become independent business owners, it is about creating and nurturing a learning environment that promotes entrepreneurial traits and behavior such as becoming a creative and independent thinker, risk taker, assuming responsibility and valuing diversity. This means that entrepreneurship education has to do with creating an attitude of self- reliance.

In 2010, the Nigerian Educational Research and Development Council (NERDC) restructured the senior secondary education curriculum by introducing 34 entrepreneurship subjects into the curriculum. The subjects are meant to empower the youth upon completing their education. This was done so as to make Nigerians to be job creators rather than job-seekers. According to NERDC (2010), every student must offer at least one entrepreneurship subject and must register for it in public examination. The effective implementation of the secondary schools entrepreneurship curriculum is expected to equip the students with skills and knowledge for job creation, wealth generation and poverty alleviation.

Statement of the Problem

The entrepreneurship skills acquired at the end of secondary school education seems inadequate to make secondary school graduates competent enough and self-reliant. Hence, they cannot contribute effectively to nation building. Inadequate entrepreneurship skills made some of the secondary school leavers to remain less creative, un-employed and job seekers rather than becoming self-reliant, creative and job givers. This problem apparently leads some of them into different forms of crime such as armed robbery, kidnapping, banditry, drug abuse among others. This paper investigate and make assessment of the implementation of entrepreneurship education curriculum in secondary schools in Sokoto metropolis, Sokoto State, Nigeria.

Purpose of the Study

The purpose of this study assessed the percentage implementation of entrepreneurship education curriculum in secondary schools in Sokoto metropolis, Sokoto State, Nigeria. Specifically, this study identified;

i. The entrepreneurship subjects taught in secondary schools in Sokoto metropolis
ii. The entrepreneurship subjects with specialist teachers.
iii. The infrastructure available for teaching entrepreneurship subjects.

Research Questions

To achieve the purpose of the study, the following research questions were posed:

i. What are the entrepreneurship subjects taught in secondary schools in Sokoto metropolis?
ii. What are the entrepreneurship subjects with specialist teachers in Sokoto metropolis?

iii. What is the infrastructure available for teaching entrepreneurship subjects in secondary school in Sokoto metropolis?

Methodology

Survey research design was adopted for the study. The population of the study was all the secondary school teachers from the twenty three (23) schools offering entrepreneurship subjects in Sokoto metropolis with a total of 33 teachers teaching entrepreneurship subjects. Twenty three teachers were randomly selected as sample, one teacher from each of the twenty three secondary schools offering entrepreneurship subjects in Sokoto metropolis.

Instrument used for data collection was a checklist constructed by the researcher; titled "Assessment of Entrepreneurship Curriculum Implementation Checklist'' (AECIC) the checklist was divided into three sections. Section A consists of a list of 34 Entrepreneurship subjects introduced by Nigeria Educational Research and Development Council (NERDC) into the curriculum. Respondents were to choose YES for the subject taught in their school and NO for the subject not taught in their schools. Section B, the respondents were to choose YES for the entrepreneurship subjects with specialist teachers and NO for the subjects without specialist teachers. Section C, the respondents were to choose YES for the availability of the infrastructure, and NO for the non-availability of the infrastructure for teaching the subjects.

The instrument was validated by experts in the Department of Curriculum Studies and Educational Technology of Usmanu Danfodiyo University Sokoto. Reliability of the instrument was established using test, retest method, reliability coefficient of 0.70 was obtained using Pearson Product Moment Correlation. The instrument was distributed to the respondents (teachers) across all the sample schools with the help of research assistant. Within two days, the instrument was duly filled by the respondents and collected back by the researcher and his assistant. Data collected were analyzed using frequency count and simple percentage. The criteria used for making decision on the level of implementation, availability of specialist teachers, and availability of infrastructure are; very low VL (from 1-45%), Low L (from 46-55%), High H (from 56-75%), and very high VH (from 76-100%) respectively.

Presentation and Analysis of the Findings

Research Question 1: What are the entrepreneurship subjects taught in secondary school in Sokoto metropolis?

Table 1:

Frequency and Percentage Responses on Entrepreneurship Subjects Taught in Secondary School in Sokoto metropolis

S/N	**List of entrepreneurship subjects**	YES	%YES	NO	%NO
1	Auto body repair and spray painting	2	10	18	90
2	Auto electrical work	2	10	18	90
3	Auto mechanical work	6	30	14	70
4	Auto parts merchandizing	2	10	18	90
5	Air conditioning and refrigeration	0	0	20	100
6	Welding and fabrication Eng. Craft practice	8	40	12	60
7	Electrical installation and maintenance	0	0	20	100
8	Radio, TV and electrical work	0	0	20	100
9	Block laying, bricklaying and concrete work	4	20	16	80
10	Painting and decoration	10	50	10	50
11	Plumbing and pipe fitting	6	30	14	70
12	Machine wood working	6	30	14	70
13	Carpentry and joinery	4	20	16	80
14	Furniture making	4	20	16	60
15	Upholstery	0	0	20	100
16	Catering and craft practice	0	0	20	100
17	Garment making	0	0	20	100
18	Textile trade	0	0	20	100
19	Dying and Bleaching	0	0	20	100
20	Printing craft practice	0	0	20	100
21	Cosmetology	0	0	20	100
22	Leather goods manufacturing & repair	0	0	20	100
23	Key boarding	0	0	20	100
24	Data processing	16	80	4	20
25	Store keeping	12	60	8	40
26	Book Keeping	10	50	10	50
27	GSM maintenance	0	0	20	100
28	Photography	0	0	20	100

29	Tourism	0	0	20	100
30	Mining	0	0	20	100
31	Animal husbandry	16	80	4	20
32	Fisheries	2	10	18	90
33	Marketing	18	90	2	10
34	Salesmanship	8	40	12	60
	Total No. of subjects taught/not taught	18	**52.9**	16	**47.1**

Note: NERDC (2010)

From Table 1. The following subjects: Air conditioning, electrical installation, radio TV and electrical work, upholstery, catering and craft practice, garment making, textile, dying, cosmetology, leather goods manufacturing, keyboarding, GSM maintenance, photography, tourism and mining recorded 0% implementation. This shows that they are not taught in any of the sample schools. 90% of the respondents agreed that Marketing is taught in their schools, 80% agreed that Animal husbandry is taught in their schools, 80% agreed that Data processing is taught in their schools, 60% agreed that Store keeping is taught in their schools, and 50% agreed that Book keeping is taught in their schools. 52.9% of 34 entrepreneurship subjects were taught in secondary schools in Sokoto metropolis, while 47.7% of 34 entrepreneurship subjects were not taught in secondary schools in Sokoto metropolis.

Research Question 2: What are the entrepreneurship subjects with specialist teachers?

Table 2:
Frequency and Percentage Responses on Availability of Specialist Teachers for Entrepreneurship Subjects in Secondary Schools in Sokoto metropolis

S/N	**List of entrepreneurship subjects**	YES	%YES	NO	%NO
1	Auto body repair and spray painting	0	0	20	100
2	Auto electrical work	0	0	20	100
3	Auto mechanical work	2	10	18	90
4	Auto parts merchandizing	2	10	18	90
5	Air conditioning and refrigeration	0	0	20	100
6	Welding and fabrication Eng. Craft practice	4	40	16	60
7	Electrical installation and maintenance	0	0	20	100
8	Radio, TV and electrical work	0	0	20	100
9	Block laying, bricklaying and concrete work	1	5	19	95
10	Painting and decoration	4	20	16	80
11	Plumbing and pipe fitting	4	20	16	80
12	Machine wood working	5	25	15	75
13	Carpentry and joinery	3	15	17	85
14	Furniture making	4	20	16	80
15	Upholstery	0	0	20	100
16	Catering and craft practice	0	0	20	100
17	Garment making	0	0	20	100
18	Textile trade	0	0	20	100
19	Dying and Bleaching	0	0	20	100
20	Printing craft practice	0	0	20	100
21	Cosmetology	0	0	20	100
22	Leather goods manufacturing & repair	0	0	20	100
23	Key boarding	0	0	20	100
24	Data processing	14	70	6	30
25	Store keeping	8	40	12	60
26	Book Keeping	8	40	12	60
27	GSM maintenance	0	0	20	100
28	Photography	0	0	20	100
29	Tourism	0	0	20	100
30	Mining	0	0	20	100
31	Animal husbandry	10	50	10	50

32	Fisheries	0	0	20	100
33	Marketing	16	80	4	20
34	Salesmanship	3	15	17	85
	Total No. of Subjects	15	**44.1**	19	**55.9**

Note: NERDC (2010)

Data in Table 2 indicates that, 80% of the teachers responded that they have specialist teachers in Marketing, 70% of the teachers responded that they have specialist teachers in Data processing, 50% of the teachers responded that they have specialist teachers in Animal husbandry, 40% of the teachers responded that they have specialist teachers in Book keeping, Store keeping, and Welding, 20% of the teachers responded that they have specialist teachers in Furniture making, plumbing and painting etc. 44.1% of 34 entrepreneurship subjects taught in secondary schools in Sokoto metropolis have specialist teachers, 55.9% of 34 entrepreneurship subjects taught in secondary schools in Sokoto metropolis do not have specialist teachers. The average percentage for the availability of specialist teachers is 13.5%.

Research Question 3: What is the infrastructure available for teaching entrepreneurship subjects in secondary school?

Table 3:
Frequency and Percentage Responses on the Availability of Infrastructure for Entrepreneurship Subjects in Secondary Schools

S/N	List of infrastructures	YES	%YES	NO	%NO
1	Auto electrical workshop	1	5	19	95
2	Auto mechanical workshop	2	10	18	90
3	Air conditioning and refrigeration workshop	0	0	20	100
4	Welding/metal workshop	3	15	17	85
5	Electrical installation and maintenance	0	0	20	100
6	Radio, TV and electrical workshop	0	0	20	100
7	Concrete/block laying workshop	4	20	16	80
8	Painting and decoration	5	25	15	75
9	Plumbing and pipe fitting	2	10	18	90
10	Carpentry and joinery workshop	2	10	18	90
11	Furniture making workshop	4	20	16	80
12	Upholstery workshop	0	0	20	100
13	Clothing and textile workshop	0	0	20	100
14	Cosmetology workshop	0	0	20	100
15	Leather workshop	0	0	20	100
16	Computer laboratory	16	80	4	20
17	GSM maintenance workshop	0	0	20	100
18	Photography Studio	0	0	20	100
19	Mining workshop	0	0	20	100
20	Animal farm	5	25	15	75
21	Fish pond	2	10	18	90
22	Cosmetology laboratory	0	0	20	100
	Total No. of infrastructure available/not available	12	**54.5**	10	**45.5**

Note: NERDC (2010)

Data in Table 3 show that 80% of the teachers responded that they have Computer laboratory in their schools, 25% of the teachers responded that they have Animal farm, painting and decoration workshop in their schools, 15% of the teachers responded that they have Furniture making workshop, welding and metal workshop, 10% responded that they have auto mechanical workshop, plumbing workshop and carpentry workshop, 5% responded that they have auto electrical workshop. 54.5% of 22 infrastructures for teaching entrepreneurship subjects in

secondary schools in Sokoto metropolis are available, 45.5% of 22 infrastructures for teaching entrepreneurship subjects in secondary schools in Sokoto metropolis are not available. The average percentage response for availability of infrastructure for teaching Entrepreneurship subjects is 20.5%.

Discussion of Findings

The study reveals that the level of implementation of entrepreneurship curriculum in secondary schools in Sokoto metropolis is low. This is in line with the findings of Ementa (2013) who reported that the entrepreneurship curriculum is not fully implemented in senior secondary schools. The level of availability of specialist teachers in secondary schools in Sokoto metropolis to teach entrepreneurship subjects is very low. This agrees with Odukoya (2011) who reported that one of the challenges of implementing senior secondary entrepreneurship subjects is the shortage of professional teachers. The level of availability of infrastructures for teaching entrepreneurship subjects is low. This agrees with the findings of Mary and Simon (2018) who reported that, the extent of availability of infrastructure to teach Entrepreneurship subjects in secondary school is low.

Conclusion

Entrepreneurship education is meant to equip the learner with necessary knowledge and skills that will enable them to become self-reliant, job creative and poverty allevators. The entrepreneurship skills acquired by secondary school leavers appear to be inadequate thus; they remain less-creative and unemployed. Findings of this study reveals that, level of implementation of entrepreneurship education curriculum in secondary schools in Sokoto metropolis is low, availability of specialist teachers as well as the availability of infrastructure for teaching entrepreneurship subjects in secondary schools in Sokoto metropolis are also low.

Recommendations

Based on the findings of the study, the following recommendations were made;

i. The Federal Government through NERDC and Federal Ministry of Education should work collaboratively with teachers, school administrators and other stakeholders to ensure effective implementation of entrepreneurship subjects introduced into the secondary schools curriculum.
ii. Federal and State Governments should recruit more entrepreneurship specialist teachers and also organize a workshop and seminars from time to time on entrepreneurship education for both specialist and none specialist teachers in secondary schools.
iii. Government should also provide all necessary infrastructure and equipment for effective implementation of entrepreneurship education subjects in Secondary Schools.

Reference

Adesulu, D. (2011). *Senior Secondary Curriculum to Empower Students for Wealth Generation*, retrieved 10th February, 2022. At https://www.vanguard.com.Ed**.**

Akudolu, L. (2010). Curriculum Framework for Entrepreneurship Education in Nigeria *Unizik Orient Journal of Education* 5 (2), 104-111

Ementa, C. N. (2013). Curriculum Implementation of Entrepreneurship Subjects at the senior secondary school: A case for entrepreneurship Education at the senior secondary in Nigeria. *Unizi Orient Journal of Education. 7(1)*, 165-170

Kelly, A.V (2009). *The Curriculum Theory and Practice*. Newbury Park: CA- Sage

Mary E. A and Simon W. U (2018) *Assessment ofIimplementation of Entrepreneurship Education Curriculum in secondary schools in Uyo*; Akwa Ibom State.

Nigerian Educational Research and Development Council. (2010). Abuja: NERDC

Odukoya, J. (2016). *Education and Development in Nigeria*. Retrieved From https://www.Logs.Worldbank.Org

Sing, S.K (2015). Entrepreneurship Education: Concept, Characteristics and Implication for Teacher Education. *International Journal of Education 5 (1)*, 21-35

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SCIENCE, TECHNOLOGY, ENGINEERING, ART, AND MATHEMATICS EDUCATION FOR TECHNOLOGICAL BREAKTHROUGH IN NIGERIA

By

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Abstract
The paper focuses on harnessing opportunities in STEAM education for technological breakthroughs. STEAM education encompasses an interdisciplinary approach to learning, wherein real-world problems are tackled through the combined application of science, technology, engineering, art, and mathematics. Before the integration of art, STEM education, which encompasses science, technology, engineering, and mathematics, already existed. By incorporating art into the equation, STEAM education fosters creativity and provides students with valuable skills in collaboration, inquiry, problem-solving, and critical thinking. Moreover, STEAM education plays a pivotal role in generating employment opportunities by emphasizing entrepreneurship education, thereby addressing the persistently high unemployment rates prevalent in the country. The article underscores the possibility of leveraging STEAM education for technological advancement, provided certain issues are addressed effectively. Key problem areas include the availability of qualified teachers, adequate IT resources, well-designed STEAM curricula, and sufficient funding. To overcome these challenges, the article suggests practical recommendations. One such recommendation is the recruitment of trained STEAM instructors who possess proficiency in information and communication technology (ICT) for Nigerian classrooms. By implementing these measures, the potential of STEAM education can be harnessed to propel technological breakthroughs.

Keywords: Creativity, Entrepreneurship Education, STEAM, STEM, Technological breakthrough, Sustainable Development Goal 4

Introduction

Modern societies face numerous challenges that demand diverse approaches for effective solutions. The integration of technology into education has provided relief for humanity. However, addressing real-life problems requires problem-solving skills, creativity, and critical thinking, which can be facilitated by Science Technology Engineering Art and Mathematics (STEAM). STEAM education emphasizes the practical application of theoretical knowledge, promoting trans-formative learning experiences (Taylor, 2016). It is a comprehensive interdisciplinary model that combines science, technology, engineering, art, and mathematics (Monkeviciene, O., Autukeviciene, B., Kaminskiene, L., & Monkevicius, J. (2020). Scholars argue that graduates struggle to apply their knowledge to meet the growing demands of the modern era (Singh, 2021). To address this challenge, creative thinking, which can be fostered through STEAM, is crucial (Monkeviciene, et al., 2020).

While STEM (Science Technology Engineering and Mathematics) was the focus decades ago, the inclusion of art in STEAM emphasizes creativity (Singh, 2021). The emergence of STEAM is vital for the economic growth of any nation. It equips students with teamwork, inquiry, problem-solving, and critical thinking skills (Singh, 2021). Numerous countries worldwide have embraced STEAM as a means to solve local and global issues. Similarly, Nigeria faces diverse challenges, including high youth unemployment and insecurity. Moreover, despite available opportunities, Nigeria lags in technological advancement. This article explores various ways in which STEAM can foster technological breakthroughs in Nigeria.

Concept of STEAM

The integration of Arts into STEM was as a result of non-inclusion of Arts discipline into STEM. It is now accepted as STEAM from the initial STEM. However, the inclusion of art gave rise to the concept of STEAM. By encompassing the arts subjects, STEAM provides students with creativity, artistic abilities, and knowledge about the world of art. This interdisciplinary approach in education enhances collaboration, creativity, and digital skills among students. It is essential for learning today to equip students with a wide range of skills that do not restrict their future opportunities. In the past, specific subjects were associated with particular skills, such as science and mathematics being linked to computational abilities. This limited graduates in these fields to certain careers, requiring additional training to pursue jobs outside their domain. Conversely, graduates in the arts are believed to possess better managerial skills and creativity. The STEAM concept aims to integrate all these skills into a single interdisciplinary model, preparing 21st-century graduates with comprehensive knowledge. STEAM education plays a crucial role in preparing individuals to become innovators, leaders, educators, and learners in the 21st century. In Nigeria, the STEAM model allows graduates from fields like history or religious studies to work in financial corporations where computational skills are prioritized. Consequently, STEAM has made entrepreneurship more accessible in the 21st century.

STEAM and Entrepreneurship Education

Entrepreneurship Education serves as a tool for developing understanding, abilities, and skills to support a diverse society, provide job opportunities, foster personal growth, and encourage community involvement. Unfortunately, many courses in Nigerian institutions lack creativity and critical thinking, which hinders the production of graduates capable of independent work outside of government jobs. Creativity and critical thinking are crucial for problem-solving and job creation, which explains the high percentage of youth unemployment in Nigeria. As more graduates enter the workforce from universities, polytechnics, and Colleges of Education each year, the issue of unemployment in Nigeria becomes increasingly alarming and prevalent as shown in Table 1 on the unemployment rate from in Nigeria.

Table 1:

Unemployment Rate in Nigeria for 2017

Group	1st Quarter (%)	2nd Quarter (%)	3rd Quarter (%)
Never attended school	14.8	16.0	18.6
Below primary school	14.9	20.0	23.2
Primary school	10.3	11.4	13.5
Secondary school	15.4	13.9	16.2
Post-secondary school	16.7	28.0	31.8

Source: National Bureau of Statistics (2017)

The STEAM as an Educational Model, Cultivates Twenty-first-century Graduates by Incorporating Entrepreneurship Education. In contemporary Nigeria, Possessing a certificate in poultry farming is no longer a prerequisite for establishing a successful venture in that field. Similarly, individuals who utilize their computer knowledge to earn a living are not necessarily equipped with certificates in computer science. The crux of the matter is that many of these essential skills fall under the purview of STEAM. Entrepreneurship education has been seamlessly integrated into STEAM to bolster job creation in the current era. Through the amalgamation of entrepreneurship education, a new model called STEAME emerges. This model, characterized by research, creativity, and critical thinking, offers a fresh perspective on entrepreneurial skills (Kovatcheva & Koleva, 2021). Even in nations with low unemployment rates, such as Malaysia, entrepreneurial education has proven to be a global tool for tackling joblessness (Prabhu, 2019).

Importance of STEAM Education

Creativity is critical to innovation, which makes it important to students learning. STEM education helps students develop problem-solving skills, thinking and digital skills; however, the addition of the art is for creativity (Taylor, 2016). Therefore, this provides students with creative talent, a vision for future works, and a digital mind. Art inclusion helps both teachers and students to develop communication skills and expression and other skills such as imagination, observation and perception (Taylor, 2016). Taylor thinks STEAM encourages children to study in a

revolutionary way. Success in any field of endeavour depends on these skills. Many companies and agencies today are not only looking for graduates who have fantastic grades but those with good communication skills and the ability to express their own opinions (Muthiah, 2012). In the 21st century, passive graduates who are not proactive and imaginative would find it challenging to do anything well. STEAM education produces problem solvers, critical thinkers and inventors for the future generation. It unifies as it brings the four science-oriented disciplines with the art of creativity. For instance, it was the general opinion that these courses (science, engineering and mathematics) are not related to the art. However, with STEAM, research studies show that artistic talent makes students creative (Singh, 2021). Communication skill is a critical repertoire needed by every graduate irrespective of the field of study. However, most science-oriented graduates lack the skill. With STEAM education, the challenge of communication skills would be overcome.

STEAM education as an interdisciplinary approach to learning encourages learners to incorporate creativity into knowledge for solving real-world problems (Dahal, 2022). A significant feat has been achieved in the area of job creation with the aid of STEAM education in recent times. There are cases of entrepreneurs making progress in areas outside their primary disciplines of creativity because they embraced STEAM education. This is one fundamental function of STEAM in promoting the entrepreneurial skills of learners. STEAM education is critical to the growth of the economy of any nation.

STEAM Education on the Economy of Nations

Studies have shown how important STEAM education is to the development of any country. Therefore, developing countries must prioritize their development. Below are some of its effects on the economies of various countries.

a. **Workforce Development*:*** STEAM education equips students with the knowledge and skills needed for a wide range of careers in growing industries such as technology, engineering, healthcare, and advanced manufacturing. By fostering a deep understanding of these subjects and promoting hands-on, practical learning experiences, STEAM education helps create a skilled and adaptable workforce that can drive economic growth.

b. **Innovation and Entrepreneurship:** The integration of arts and creativity in STEAM education (Monkeviciene et al., 2020) encourages students to think outside the box, develop innovative solutions, and become entrepreneurs. By nurturing an entrepreneurial mind-set and providing opportunities for students to explore their ideas, STEAM education contributes to the creation of new businesses, products, and services, leading to job creation and economic expansion.

c. **Global Competitiveness:** In an increasingly interconnected and technology-driven world, nations that prioritize STEAM education gain a competitive edge. By producing a workforce proficient in science, technology, engineering, and mathematics, countries can attract

investment, foster research and development, and remain at the forefront of technological advancements. This, in turn, contributes to economic competitiveness and positions the nation as a leader in innovation.

d. **Industry Collaboration:** STEAM education often involves partnerships between educational institutions and industries. These collaborations provide students with real-world exposure, internships, and hands-on experiences that align with industry needs (Talan, 2021). By fostering strong ties between academia and industry, STEAM education promotes the transfer of knowledge, facilitates technology adoption, and supports economic sectors in driving productivity and efficiency.

e. **Economic Diversification:** STEAM education encourages students to explore diverse career pathways beyond traditional fields. By fostering interdisciplinary skills and knowledge, students are prepared to engage in emerging sectors such as renewable energy, biotechnology, artificial intelligence, and data science. This diversification of skills and industries helps nations reduce dependence on a single sector and builds resilience in the face of economic changes.

Overall, STEAM education plays a crucial role in preparing the workforce of the future, promoting innovation and entrepreneurship, enhancing global competitiveness, fostering industry collaboration, and driving economic growth. Through strategic investments in STEAM education, nations can forge a sustainable and prosperous economy that excels in the knowledge-driven era, catalysing technological breakthroughs.

Harnessing STEAM Opportunities for Technological Breakthrough

STEAM has several opportunities if properly harnessed could help the nation to achieve a breakthrough technologically. However, several issues about STEAM require attention to make the breakthrough seamless.

The first is the issue of the curriculum. Presently in the Nigerian educational system, there is no workable STEAM curriculum. There are curricula for science and technology, engineering, art and mathematics at various educational levels. In a country like Nigeria, where there is so much noise about STEM education there has not been a particular curriculum for STEM education not to talk about STEAM. STEAM would not work well without a particular curriculum for it. Many countries like the US, Korea and China have STEAM curricula (Taylor, 2016), which might inform the level of their breakthrough in technology. Nigerian government could also bring teachers in the various subjects that make up STEAM together to draft curricula for all levels of education. One thing that should be put in mind in drafting a curriculum is that STEAM goes beyond the classroom. It provides opportunities that determine how we think and behave (Singh, 2021). The

curriculum must embrace creativity, critical thinking, collaboration and communication, which some scholars called the 4Cs of twenty-first-century skills (Singh, 2021).

Secondly, STEAM education requires lots of modern-day learning resources. Learning resources in Nigerian schools are obsolete for technological breakthroughs. The world is in education 4.0 being a driver of the fourth industrial revolution (4IR). Nigeria is yet to leave education 2.0 and the second industrial revolution (Aina, 2022). Nigerian schools still depend on analogue resources for learning and the world has migrated to digital. STEAM education cannot lead to any breakthrough if classroom teaching is mainly through chalkboards and in confined locations. Besides, the roles of teachers in STEAM are expected to be coaching and scaffolding, which allow students to learn by themselves. Students learning in this digital age are not teacher-dependent; rather students are allowed to seek learning information by themselves. Many schools and homes lack functional internet access in Nigeria, which is a serious drawback to technological breakthroughs through STEAM.

Besides, several scholars have shown concern about a lack of qualified teachers to teach STEAM not only in Nigeria (Li, Zhao, Zhu, Ma & Liao., 2022). Qualified teachers are critical in students' learning because they are considered a crucial variable in all educational systems (Lawal & Braimoh, 2018). Presently, there is a scanty specialised qualified teacher to teach STEAM in Nigerian schools. However, there are teachers in subject domains constituting STEAM. The greatest challenge about these teachers is that significant numbers of them are not computer literate (Agormedah *et al*., 2020). However, Sumathi and Selvarani (2020) argued that technology in the classroom makes teaching easy and all teachers must make use of the benefit. Similarly, Talan (2021) observed the importance of computers in collaborative learning, which gives support to STEAM education being a collaborative interdisciplinary model. Moreover, a majority of the literate among these teachers do not have a personal computer (Aina & Abdulazeez, 2022). Qualified teachers are critical to STEAM education for a technological breakthrough. Competencies in Technology are vital to STEAM and most teachers are not competent in this domain (Şen-Akbulut & Öner, 2021). The heart of STEAM is the ability to interact with ICT. It is the core of education in this century (Ifinedo *et al.,* 2019). Studies show that there are great advantages to combining digital learning with STEAM (Özer & Demirbatır, 2023). Therefore, to use STEAM for a breakthrough in technology requires the availability of ICT resources and teachers' ability to use them.

The Success of STEAM in any nation heavily relies on adequate funding. In Nigeria, accomplishing technological breakthroughs through STEAM may present challenges due to the yearly allocation of funds to the education sector. The table provided depicts the budgetary allocation for Nigeria's education over ten years.

Table 2

Nigeria's Education Budgetary Allocation from 2010 to 2019

Year	Budget (₦ Trillion)	Education Budget (₦ Billion)
2010	5.160	249.09
2011	4.972	306.30
2012	4.877	400.15
2013	4.987	426.53
2014	4.962	493.00
2015	5.068	392.20
2016	6.061	369.60
2017	7.444	550.00
2018	8.612	605.80
2019	8.830	620.50
Total	**60.973**	**4413.17**

Source: Adoye, Adanikin and Adanikin (2020).

Table 2 above reveals that the annual education budget for ten consecutive years is severely inadequate and falls well below the stipulation set by UNESCO. Insufficient funding for education has hindered the attainment of a technological breakthrough, necessitating an increase in the yearly education budget at all levels by the government.

Problems of STEAM Opportunities for Technological Breakthrough in Nigeria

Introducing Science, Technology, Engineering, Arts, and Mathematics education in Nigeria offers several prospects for technical advancements, although it also encounters notable obstacles. Presented below are three primary challenges along with their prospective resolutions;

i. **Insufficient Infrastructure**

Many schools in Nigeria, particularly in rural regions, lack the critical infrastructure to facilitate STEAM education. This encompasses the limited availability of laboratories, computers, internet connectivity, and other essential resources for practical learning and experimentation.

Solutions

- **Enhanced Government and Private Sector Investment:** Augmented investment from both the government and private sector is necessary. Public-private partnerships can be established to finance the construction and improvement of school infrastructure.
- **Mobile STEAM Labs:** Presenting portable STEAM laboratories that can be transported to various schools, particularly in remote regions, to offer pupils the opportunity to utilize essential tools and resources.
- **Digital Learning Platforms:** Creating and advocating for online educational platforms that provide STEAM courses and materials can assist address the deficiency in physical infrastructure.

ii. **Inadequate Teacher Training;**

A significant number of instructors in Nigeria lack the training to effectively teach STEAM courses. This encompasses a deficiency in ongoing professional growth and limited access to current pedagogical approaches and technological advancements.

Solutions

- **Professional Development Programmes:** Implementing extensive professional development programmes that specifically target STEAM education. This may encompass workshops, courses, and certifications specifically designed for educators.
- **Teacher Exchange Programmes**: Implementing teacher exchange programmes with nations that possess sophisticated STEAM education systems, enabling Nigerian educators to acquire optimal strategies and pioneering pedagogical approaches.
- **Promoting STEAM Education with Incentives:** Implementing a system that provides bonuses or career progression prospects to educators who specialize in STEAM subjects and engage in continuous professional development.

iii. **Cultural-and-Societal-Obstacles;**

Various cultural and sociological obstacles exist that deter girls and young women from engaging in STEAM subjects, particularly in terms of participation. This encompasses preconceived notions, prejudices based on gender, and a general lack of understanding regarding the significance and possibilities of STEAM professions.

Solutions

- **Awareness Campaigns:** Implementing nationwide awareness campaigns to advocate for the significance of STEAM education and professions, showcasing accomplished role models from many backgrounds.
- **Gender-Inclusive Policies**: Enforcing policies that promote and facilitate the involvement of females, including girls and young women, in STEAM education.

These can encompass scholarships, mentorship programmes, and the establishment of secure and encouraging learning settings.

- **Community Engagement:** Actively involving communities to change cultural perspectives and promote parental endorsement for children's participation in STEAM education, irrespective of gender.

  Nigeria can establish a strong STEAM education system that promotes technological innovation and equips the next generation to meet the needs of a swiftly evolving world by tackling these difficulties.

Conclusion

In conclusion, STEAM education embodies an interdisciplinary learning approach where students integrate creativity with knowledge to innovate and address human problems. It serves as a means to develop crucial 4C skills (creativity, critical thinking, collaboration, and communication). Furthermore, STEAM education fosters entrepreneurial skills that play a vital role in job creation. However, to achieve a technological breakthrough in STEAM in Nigeria, practical curricular tailored for all educational levels are indispensable. Additionally, given that STEAM education relies on contemporary ICT resources, it is imperative to have qualified teachers who possess technological expertise. Lastly, the current annual budget allocated to the Nigerian education system is inadequate to support the objective of achieving technological advancement through STEAM education.

Suggestions

Considering the aforementioned points, the following suggestions are crucial:

i. Implement STEAM curricula across all levels of education in Nigeria.
ii. Recruit proficient STEAM educators who are well-versed in utilizing ICT in the classroom.
iii. Ensure the availability of ICT resources for teaching and learning in Nigerian schools.
iv. Assign high priority to education funding in the nation's annual budget.

By taking these suggested ideas into account, Nigeria can make significant strides in achieving a technological breakthrough through the implementation of STEAM education.

References

Adekola, P. O., Allen, A. A., Olawole-Isaac, A., Akanbi, M.A., & Adewumi, O. (2016).Unemployment in Nigeria; A challenge of demographic change? *International Journal of Scientific Research in Multidisciplinary Studies, 2*(5), 1-9.

Adoye, I. A., Adanikin, A. F., & Adanikin, A. (2020). COVID-19 and E-learning:Nigeria Tertiary education system experience. *International Journal of Research and Innovation in Applied Science (IJRIAS) 5*(5), 28-31.

Agormedah, E. K., Henaku, E. A., Ayite, D. M. K., & Ansah, E. A. (2020). Online Learning in Higher Education during COVID-19 Pandemic: A case of Ghana. *Journal of Educational Technology & Online Learning*, *3*(3), 183-210.

Aina, J. K. (2022). Entrepreneurial education: Emerging education 4.0 and fourth industrial revolution in Nigerian Colleges of Education. *Journal of Global Research in Education and Social Science, 16*(5), 14-21. DOI: 10.56557/JOGRESS/2022/v16i58031

Aina, J. K., & Abdulazeez, A. W. (2022). Lecturers' Perception of Technological Pedagogical Content Knowledge in Nigerian Colleges of Education. In D. Ortega-Sánchez (Ed.), Education – Annual Volume 2022 (Working Title). UK: IntechOpen. https://doi.org/10.5772/intechopen.108678

Aina, J. K. (2016). Employment of untrained graduate teachers in schools: The Nigeria case. *Journal of Studies in Social Sciences and Humanities, 2*(2), 34-44.

Bati, K., Yetişir, M. I., Çalişkan, I., Güneş, G., & Saçan, E. G. (2018) Teaching the concept of time: A steam-based program on computational thinking in science education, *Cogent Education, 5*(1),1-16. DOI:10.1080/2331186X.2018.1507306

Dahal, N. (2022). Transformative STEAM education as a praxis-driven orientation. *Journal of STEAM Education, 5*(2), 167-180. https://doi.org/10.55290/steam.1098153

Ifinedo, E., Saarela, M., & Hämäläinen, T. (2019). Analysing the Nigerian teacher's readiness for technology integration. *International Journal of Education and Development using Information and Communication Technology (IJEDICT), 15*(3), 34-52.

Igwe, P.A., Madichie, N.O., Chukwuemeka, O., Rahman, M., Ochinanwata, N., & Uzuegbunam, I. (2022). Pedagogical approaches to Responsible Entrepreneurship Education. *Sustainability, 14*(9440), 1-16. https://doi.org/10.3390/su14159440

Kovatcheva, E., & Koleva, M. (2021). STEAME Model in Action: Challenges and Solutions in Mastering the Digital Culture. *E-Learning and Digital Education in the Twenty-First Century.* Retrieved from https://www.intechopen.com/chapters/76147

Lawal, M. B., & Braimoh, D. S. (2018). The Nigerian teacher education industry: Gaps, challenges and prospects. *International Journal of Art Humanities and Social Sciences, 3*(1), 47-56

Li, J.; Luo, H., Zhao, L., Zhu, M., Ma, L.,& Liao, X. (2022). Promoting STEAM Education in Primary School through Cooperative Teaching: *A design-based research study. Sustainability,* 14(10333), 1-16. https://doi.org/10.3390/su141610333

Monkeviciene, O., Autukeviciene, B., Kaminskiene, L., & Monkevicius, J. (2020). Impact of Innovative STEAM education practices on teacher professional development and 3-6-year-old children's competence development. *Journal of Social Studies Education Research, 11*(4), 1-27.

Muthiah, K. (2012). Global importance of communication skills. *International Journal of Applied Research & Studies, 1*(2), 1-6.

National Bureau of Statistics. (2017). *Labour Force Statistics Vol. 1: Unemployment and Underemployment Report (Q1-Q3 2017).* Abuja, Nigeria: National Bureau of Statistics.

Özer, Z., & Demirbatır, R. E. (2023). Examination of STEAM-based digital learning Applications in music education. *European Journal of STEM Education*, *8*(1), 02. https://doi.org/10.20897/ejsteme/12959.

Prabhu, J.J. (2019). A study on entrepreneurship education and entrepreneurial attitude in Malaysia- The relationship between employment and unemployment analysis. *International Journal of Trend in Scientific Research and Development (IJTSRD), 3*(3), 840-842.

Şen-Akbulut, M., & Öner, D. (2021). Developing pre-service teachers' technology Competencies: A project-based learning experience. *Çukurova Üniversitesi Eğitim Fakültesi Dergisi, 50*(1), 247-275

Singh, M. (2021). Acquisition of 21st Century Skills through STEAM Education. *Academia Letters*, Article 712. https://doi.org/10.20935/AL712.

Sumathi, K., & Selvarani, K. (2020). Relevance of ICT tools in teaching-learning exploiting Flipped classroom**.** *Journal of Critical Reviews, 7*(13), 1048-1052.

Talan, T. (2021). The effect of computer-supported collaborative learning on academic Achievement: A meta-analysis study. *International Journal of Education in Mathematics, Science, and Technology (IJEMST), 9*(3), 426-448. https://doi.org/10.46328/ijemst.1243

Taylor, P.C. (2016) *Why is a STEAM Curriculum Perspective Crucial to the 21st Century?* In: 14th Annual conference of the Australian Council for Educational Research, 7 - 9 August 2016, Brisbane.

Wechsler, S.M., Saiz, C., Rivas, S.F., Vendramini, C.M.M., Almeida, L.S., Mundim, M.C., & Franco, A. (2018). Creative and critical thinking: Independent or overlapping Components? *Thinking Skills and Creativity*, 27, 114-122.

SCIENCE AND NATIONAL CONSCIOUSNESS IN NIGERIA, EMERGING ISSUES, CHALLENGES AND PROSPECTS

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Abstract
The role of national consciousness in the socio-economic and scientific development of a nation cannot be over emphasized. National consciousness promotes national unity, sustainable development, peace, respect for diversity, security of life and property and others. This paper investigated the correlation of science and low level of national consciousness in our nation despite the pledge to serve Nigeria with all our strength and defend her unity. The rationale of the paper derives from the understanding that science and national consciousness is of immense benefit to the nation's development and have great prospects if well developed. It is in this bid that the paper is considering the issues of science and national identity and need for value reorientation. This paper also examined pertinent issues and challenges affecting science and national consciousness. It was found that science in Nigeria has been in existence since the commencement of private education in 1842. However, its progress has not featured great incorporation in the manufacturing and industrial sector of the economy. It is therefore, recommended that science education should be given greater emphases in real life situations in the Nigerian socio economic environment.

Keywords: Science, National Consciousness, Emerging Issues, Challenges and Prospects.

Introduction

Modern societies are dominated and driven by ideas and products from science and technology (S &T) and it is very likely that the influence of science and technology on our lives will continue to increase in the years to come. Scientific and technological knowledge, skills and artifacts invade all realms of life in modern society. The workplace and the public sphere are increasingly dependent on new as well as upon more established technologies. Scientific and technological knowledge and skills and national consciousness are crucial for most of our actions and decisions as workers, voters, consumers, etc. Meaningful and independent participation in modern

democracies assumes ability to judge the evidence and arguments associated with the many socio-scientific issues that appear on the political agenda (Ozumba, 2014).

Development at any phase is always linked with technology and technology happens when there is advancement in science. Hence science, technology and development are all proportional to each other (Ozumba, 2014). Science and Technology are tools that solve quite readily the numerous challenges people face in life daily (Ozumba, 2014). In a country like Nigeria, which seeks to improve the quality of life of all the citizens, this involves attempting to solve many problems facing the population. These problems include ill health, illiteracy, public utilities, inadequate education facilities, hunger and unemployment. Others are general security of life and properties, youth restiveness, poor industrial and communication infrastructure and corruption.

These problems acting either individually or collectively hinder development by making the people less capable of making meaningful contribution to national development. The problems also weaken determination and motivation of the people for self-reliance. However, science and technology and national consciousness have helped humans conquer many problems they face in their struggle for survival in their environment (Uduigwomen, 2009).

This paper is written in response to the high pitch concern expressed by the patriotic citizens of this country. Nigeria's image and reckoning seem to be nose diving in almost all facets of noble ratings whether from the perspective of its politics, economy, Ethics, security, education and so on. In the recent past, the increasing rate of Cyber crime and clamor for dismemberment of the federation has reached its highest crescendo. The call for national conference and re-engineering of our polity has topped the national agenda and discourse.

As the Japanese model of national development holds "the search for identity comes when there is national crisis". Nigeria, no doubt is in serious crisis and the time to seek honest solution is now if we are not to have more intractable problems in our hands.

The Concept Science, Technology and National Consciousness

Science emerged as human's invented ways of organizing their experiences. Sheldon, (2017) stated that the ways of organizing human experiences has been described as major branches of knowledge, which help us to resolve or at least reduce the numerous anxieties that results from conflicts and problems of our daily experiences, while technology is said to be the systemic application of scientific knowledge of technique gained from science in producing and making use of materials like machines, tools, weapons etc., it deals with the application of knowledge in providing solutions to practical problems of humans and their environment. Consequently, it is safe to say that science and technology are twin terms that are closely related.

Furthermore, science is concerned with the search for and understanding of knowledge about nature, technology deals with the scientific application of knowledge in the solution of practical problems of everyday living (Robert, 2015). The product of science are ideas, theories and

principles arrived at through a process of continuous enquiry, guess, devices, procedures, processes and materials, which are usually but not always derived from science.

Oxford Dictionary (2014), defines science as “the intellectual and practical activity encompassing the systematic study of the structure and behavior of the physical and natural world through observation and experiment”. Science is the pursuit and application of knowledge and understanding of the natural and world following a systematic methodology based on evidence (Uduigwomen, 2009).

According to Morris and Morris (2009), define science as “the systematic observation of natural events and conditions in order to discover facts about them and to formulate laws and principles based on these facts. It is also the organized body of knowledge that is derived from such observations and that can be verified or tested by further investigation.”

Science involves more than the gaining of knowledge. It is the systematic and organized inquiry into the natural world and its phenomena. Science is about gaining a deeper and often useful understanding of the world (Sheldon, 2017).
Science consists simply of the formulation and testing of hypotheses based on observational evidence; experiments are important where applicable, but their function is merely to simplify observation by imposing controlled conditions (Robert, 2015).

National consciousness on the other hand is a shared sense of national identity and a shared understanding that group of people shares a common ethnic/linguistic/ cultural background (Oloko, 2014).

Historically, a rise in national consciousness has been the first step towards the creation of a nation. National consciousness, at a glance, is one's level of awareness , of the collective and ones understanding that without “them” there are no “us” (Ozumba, 2014). It is the mere awareness of the many shared attitudes and beliefs towards things like family, customs, societal and gender roles, etc. The awareness allows one to have a "collective identity" which allows them to be knowledgeable of not only where they are but how those places and people around them are so significant in that they ultimately make the collective, a nation. In short, national consciousness can be defined as a specific core of attitudes that provide habitual modes for regarding life's phenomena (Oladipo, 2009).

For the importance of science and technology to be achieved in Nigeria, we must revive the high level of national consciousness in the past. Scientists from every region, tribe and culture must look beyond our differences to create innovative ideas, products and services for solving problems especially those problems peculiar to Nigeria in other to develop the nation and make it indeed the giant of Africa.

Emerging Issues in Science in Nigeria

Nigeria used to be an agrarian economy until the 1970s. It used to be the major agricultural country producing for internal usage as well as for exportation. The percentage share of these export crops in the total domestic export fell from 79.9% in 1960 to 2.6% in 1980 (Akakuru *et al.,* 2020).

The Federal Government made an entry into the Automotive business in the 1970's through agreement it had with a number of auto plants in Europe to step up two car passenger and four truck and light commercial vehicles assembly plants, using completely knocked down parts. The agreement later gave birth to Peugeot Nigeria LTD (PAN), Kaduna; Volkswagen Nigeria LTD (VWON), Lagos; Anambra Motor Manufacturing Company (ANAMCO), Enugu; Styer Nigeria LTD, Bauchi; National Truck Manufacturer (NTM), Kano; and Leyland Nigeria LTD, Ibadan. These companies were however privatized in 2007. Many of the auto component manufacturers, including Dunlop and Michellin also closed shops after establishing rubber plantations in Calabar and Benin respectively for the sourcing of local raw materials (Ogah, 2015).

It is however disheartening that Malaysia, which even took different species of palm tree seedling from Nigeria at independence in 1960, has researched so much and so well into its production more than Nigeria (Oladipo, 2009). Locally the country produces dye cloth, smith metals like iron, bronze and gold. It even manufactures soap, processes cotton into cloth and other finished goods but all these are in crude form devoid of further research (Edobor & Maliki, 2006). They stated that the country has not made enough progress in research due to some superstitious beliefs and ancestral domination of certain areas of technology. These areas are so much guarded in secrecy that other families are not allowed to get a glimpse of ideas about them. The rural-urban drift of youth did not allow them get much of this technical gift peculiar to their ancestors until their elders die with much of the knowledge.

By 1990, Nigeria's agricultural production shifted to a mono-economic product found in oil. The few surviving local technology were abandoned. Even science and technology policies are not being well articulated. The economy has experienced a lot of gas flaring and if it has ever conducted any serious research into this area at all, Nigerians are not seeing the results, not to talk of implementing the findings.

The industrial sector now depends heavily on importation of raw materials from overseas countries to keep the wheel of industrialization going despite the local content policy which ensure that a high proportion of project inputs are sourced from the host country without compromising the economics of the project or sector being leveraged. The policy also aimed at attracting foreign investment, revive the comatose plants and encourage transfer of technology and advance manufacturing activities needed for the production of affordable vehicles in the country (Ogah, 2015).

Foreign experts also provide the maintenance of the machineries. It will be noted that many of the technological growth devoid of development are being carried out by foreigners who are paid for by lifting of barrels of oil. The country continues to rely on technological transfer, which seems to be a mirage. There is technological growth but without technological development. The educational set up seems to betray the quest for scientific and technological take-off. The technical colleges have now been converted to secondary schools. Even the existing ones at the state level are so much theoretical in orientation (Ajewole & Owolabi, 2009).

In terms of policy, the Federal Republic of Nigeria (2013) provides for 70:30 ratio of admission into technology based courses and liberal arts. This policy is either deliberately not being followed or there are no candidates for the number of places. Granted that many of the senior secondary schools are comprehensive in offering disciplines like Arts, and Commercial subjects, the observation is that few percentages offer sciences while many concentrate on the liberal arts and the commercial subjects. Could it be that science is not popularized or the equipment is not there or/and the quality of manpower to provide the knowledge is lacking?

The administrative policies of managing the affairs of science and technology in this country leave much to be desired. We have many research institutes that much are not being heard of in terms of activities. (Ajewole & Owolabi,2009)

There is Federal Institute of Industrial Research, Owerri (FIIRO) that has been in existence before the country's independence but not much is heard of it again. Nigeria also has Standard Organization of Nigeria (SON), Raw Materials Research and Development Council (RMRDC), which are considered not very active in terms of quality control of raw materials into our industries. It is only of recent that the effort of National Agency for Food and Drug Administration and Control (NAFDAC) is being recognized. This is due to the leadership of the administrative system in the agency (FRN, 2013). The nation equally has specialized Universities in Agriculture, Science and Technology, both at federal and state levels. Some of these Universities are: Federal University of Technology Minna; Federal University of Technology, Akure; Federal University of Technology, Owerri; Ladoke Akintola University of Technology Ogbomosho, Oyo State; Rivers State University of Science and Technology, Port Harcourt; Cross River State University of Science and Technology, Calabar; Enugu State University of Technology, Enugu; Modibbo Adama University of Technology, Yola; Akwa-ibom State University of Technology; Ondo State University of Science and Technology, Okitipupa, and so on. The impact of these specialized Science and Technology Universities is not being felt yet. It could be because they are not well-equipped or the quality of manpower in the organizations and institutions is not up to the standard that would make meaningful impact. Not much cooperation too is seen between them and the industries in terms of Student Industrial Work Experience Scheme (SIWES) and research results utilization. The lack-luster performance of these institutions can also be attributed to poor funding, infrastructural deficit, corruption and the race to gain political points.

Challenges facing the development of science in Nigeria

The effective implementation of Science in Nigeria towards sustainable national development is not without some hitches (Isoun, 2014). The nation present approach to education has failed to encourage individual initiative and efforts through research and development of ideas into concrete problem solving devices. Some critical areas of science implementation challenges include;

i. **Funding**

The success of any educational policy and program depends largely on funding. Inadequate funding hinders the provision of sound and qualitative education while adequate funding facilitates quality education, provision of infrastructure, recruitment of qualified manpower, mitigates strike actions and enhances good working environment.

ii. **Lack of Instructional Materials**

The instructional materials such as equipped workshops, libraries and laboratories needed by the teacher to explain the lessons for easy understanding by the students are grossly inadequate, (Isoun, 2014). Maintains that the availability and use of instructional materials have significant effect on the performance of the learner.

iii. **Attitude Towards Science and Technology**

Many of our students have a negative attitudes towards science subjects and they believe that science subjects are very difficult especially mathematics, physics and chemistry. The wrong attitude has negative effect on science and technology education in Nigeria.

iv. **Teachers' Attitude**

Some teachers tend to be so conservative in their approach to teaching. They find it difficult to adopt new approaches in teaching their subject matter. Some are not committed and thereby discourage their students.

v. **Inadequate Teachers**

Science and technology teachers are generally in short supply in Nigerian. There are not enough qualified teachers to teach the subjects in the schools.

vi. **Large Class Size**

The ratio of teacher: pupil is a big challenge to science and technology education in Nigeria. According to the Federal Republic of Nigeria (2013), the teacher, pupil ratio should be 1:35 but this is contrary to what is observed in Nigerian schools today. In many schools today the teacher, pupil ratio is more than 1:60 (Okereke & Ughasoro, 2015).

vii. Poor Remuneration

Science and technology teachers are not adequately compensated financially compared to their inputs in education. The salary of these teachers can barely sustain them and their families for a month. Little or nothing is done to motivate these teachers in order to get the best out of them.

viii. Politics of Education

Most Nigerian politicians are not taking matters of education with the seriousness it requires, probably because most if not all their children, grandchildren and relations do not school in Nigeria. They pay lip service to education especially science and technology education.

Prospects of Science and National Consciousness in Nigeria

In spite of the enormous challenges confronting science and national consciousness in Nigeria, there are great prospects for science in advancing the nation. Some of the efforts put in place for the enhancement of science for national development include:

- The introduction of science fairs and clubs in schools.
- The introduction of junior engineers and technician scientists (JETS) competitions in schools.
- The establishment of special science and technical schools in the federation.
- The use of quota for admission and accreditation of courses into Nigerian universities and polytechnics as sixty percent (60%) for sciences and forty percent (40%) for Arts and Seventy percent (70%) sciences and Thirty percent (30%) for Arts respectively.
- The award of scholarships to deserving students studying science and technology subjects.
- Establishment of Polytechnics, Colleges of Education and Technical colleges in Nigeria.
- The establishment and implementation of the Industrial Training Fund (ITF) scheme.
- The organization and sponsoring of science and technology conferences, workshops and seminars to encourage science and technology education.
- The introduction of computer education in schools.

Suggestions for Way Forward

i. Educational facilities in the learning of science and technology in the schools should be improved so that the learning could be enhanced. Such facilities include regular supply of electricity, adequate access to Internet, and adequate laboratories and libraries.
ii. Launching national education reforms focusing on innovation and entrepreneurship. This can help produce the next generation of scientists, engineers, entrepreneurs and innovation leaders who are patriotic and believe in the Nigeria project.
iii. A robust orientation program should be organized on every medium of communication to reawaken our sense of citizenship.
iv. National consciousness should be included in the school curriculum from the nursery to the tertiary level and be made compulsory.

Conclusion

This paper has revealed that development process in Nigeria seems not to have recognized the critical role of science and technology education and national consciousness in terms of recognizing indigenous efforts in the development of science and technology. Moreover, the study reveals the need for policy consistency in the National Policy on Education. It can be concluded that Nigeria lacks the required science and technology education culture to make her great in the committee of technologically advanced nations of the world. Despite its wealth and human capital, the Nigerian economy is largely driven by the service sector, especially the telecommunication and entertainment industries, and by oil extraction. Science and national consciousness is very vital in the development of the nation. A lot needs to be done to improve the nation's science and technology and national consciousness especially through educational institutions.

References

Ajewole, G., & Owolabi T. (2009). A Handbook on Science Education for Tertiary Students. Baba Olatunji Enterprises.

Akakure, J. I. A., Egbeiyi O., Onyema C. C., & Akakuru O. U. (2020). *Nigeria Economic Growth: Dependence of Agricultural Development on Oil Exploration. Global Journal Comm manage Perspect V*ol 11 Iss.1 No: 1000001.

Edobor, S. E., & Maliki C. I. (2006). Citizenship Education in Nigeria: A Functional Approach. Ethiope Publishing Corporation.

Federal Republic of Nigeria (2013). National Policy on Education. NERDC Press.

Federal Republic of Nigeria (2013). National Policy on Science and Technology. Federal Ministry of Science and Technology.

Isoun, T. T. (2014). *Science and Technology Reforms in Nigeria.* 13 April 2023 at *www.ictp.trieste.it*/-twas/pd/NL16 3-4 PDF/10.

Morris, C. G., & Morris C. W. (2009). *Academic Press Dictionary of Science & Technology*. 22 March 2023 at www.htpps//ntv:100498

Ogah, D. (2015). *Local Content: An Elusive Element of Nigeria's* A*utomotive*. 24 May 2023 at http//www.researchgate.net

Okereke, V. E., & Ughasoro U. C. (2015). An Examination of the Effect of some Educational Resource on Mathematics Teachers'Productivity. *Journal of Educational Studies,* Institute of Education University of Jos, Volume 5 NO 1.

Oladipo, O. (2009). Philosophy and Social Reconstruction in Africa. Hope Publishers.

Oloko, O. (2014). *Crisis of Democratization, Development and Electoral Violence in Nigeria*. 29 October 2022 at www.htpps//ctv:20089

Oxford Dictionary (2014). *Online Web*. 29 October 2014 at www.oxford.dic.com

Ozumba, G. O. (2014*).* National Consciousness, Value Reorientations and Identity: An Integrative Humanist Approach. *Journal of Integrative Humanism – Ghana March 2014 ISSN 2026 – 6286.*

Robert, H. (2015). Evolution of the Earth (2nd edition). 26 March 2023 www.evolution.net//htpps

Sheldon, F. G. (2017). What is Science? Religion & Science the Best of Enemies, the Worst of Friend. A Paper Presentation at the Harbinger Symposium Held at the Department of Biological Sciences, University of South Alabama on 3 April 2017.

Uduigwomen, A. A. (2009*). A Companion of Christian Philosophy and Apologetic.* Ultimate Index Book Publishers.

Challenges of Achieving the Sustainable Development Goals in Nigeria

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Abstract

The Sustainable Development Goals (SDGs) were formally born at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. The objective was to produce a set of universal goals that meet the urgent environmental, political and economic challenges bedeviling the world. These include poverty, increasing inequality, environmental and human health degradation. The thrust of this paper is to examine the challenges to sustainable development in Nigeria. The objectives of the study are to: explain the concept of sustainable development, trace the evolution of sustainable development in Nigeria, explain the challenges to sustainable development in Nigeria and identify and explain strategies for the realization of sustainable development in Nigeria. The study established that the level of sustainable development in Nigeria is seriously affected by plethora of challenges, which can be minimized if the strategies identified and explained are adequately utilized. The study relied on secondary sources of data which included: text books, and reputable journal publications from recognized data bases.

Keywords: Achieving, Sustainable Development Goals, Challenges, Strategies, Nigeria

Introduction

In a world where the term 'sustainability' is as common as 'innovation', understanding how to truly achieve sustainable development is more critical than ever. The journey towards a sustainable future is paved with myriad challenges. It is on the basis of the aforementioned statement that this paper takes a careful look at these challenges to sustainable development and also elaborately examine the strategies of achieving sustainable development in Nigeria. For the purpose of clarity, the paper is segmented as follows; introduction, the concept of sustainable development, the evolution of sustainable development, challenges of sustainable development in Nigeria, strategies for achieving sustainable development in Nigeria and conclusion.

The Concept of Sustainable Development

Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: (i) the concept of '**needs**', in particular the essential needs of the world's poor, to which overriding priority should be given; and (ii) the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs. According to the Brundtland (2006) definition of Sustainable Development, it means that the needs of the present generation should be met without compromising the ability of the future generations to meet their own needs. It is about safeguarding the earth's capacity to support life in all its diversity and is based on the principles of democracy, gender equality, solidarity, the rule of law and respect for fundamental human rights, including freedom and equal opportunities for all. It aims at the continuous improvement of the quality of life and well being on Earth for present and future generations. To that end, it promotes a dynamic economy, with full employment and a high level of education, health protection, social and territorial cohesion and environmental protection in a peaceful and secure world, respecting cultural diversity.

Sustainable economic development is the process in which the exploitation of natural resources, the direction of investment, the orientation of technological development, and institutional change or reform are all in coordination and harmony and enhance both the current and future potential for meeting human needs. The goal of sustainable development is to secure a good living

opportunity for present and future generations, that is, using natural resources sustainably. Economic sustainability refers to balanced growth that is not based on the loss of resources or indebtedness (https://www.ykliitto.fi/yk-teemat/kestava-kehitys).

Cameron (1993) opines that, sustainable development encompasses the progressive economic and social development of human society through maintaining the security of livelihood for all peoples and by enabling them to meet their present needs, together with a quality of life in accordance with their dignity and well being, without compromising the ability of future generations to do likewise. Without questioning the principle of " development" as a method for satisfying the needs of current generations, it explicitly recognizes that future generations also have interests and even rights deserving protection in this new model of development.

The essential features of sustainable development according to Idisi (2002) and Offiong (2001) include the following:

i. ecological integrity and sustainability;
ii. equity and distributive justice at all levels;
iii. socially-relevant economic productivity and technological development;
iv. popular participation and collective autonomy and
v. prevalence and institutionalization of human development.

The Evolution of Sustainable Development

Historically, the 1972 Conference on the Human Environment in Stockholm, Sweden, attended by 113 states and representatives from 19 International Organizations, was the first genuine International Conference devoted exclusively to environmental issues. There, a group of 27 experts articulated the nexus between environment and development stating that : "although in individual instances there were conflicts between environmental and economic priorities , they were intrinsically two sides of the same coin" (Dillion, 2019). Another result of the Stockholm Conference was the creation of the United Nations Environmental Programme (UNEP), which had the mission " to provide leadership and encourage partnership in caring for the environment by

inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of the future generations".

This conference marked a significant turning point in the origin of Sustainable development as it played a catalytic role in promoting the subsequent adoption of International agreements concerned with ocean dumping, pollution from ships, and the endangered species trade ((Moga., Bala, & Dantsoho,2023). It also adopted the " Stockholm Declaration on the Human Environment", which included forward-looking principles, such as Principle 13167, that declared the need for integration and coordination in development planning to allow for environmental protection. However, "the Stockholm Conference was limited in its effectiveness because environmental protection and the need for development, especially in developing countries, were seen as competing needs and thus were dealt with in a separate, uncoordinated fashion". Some critics concluded that "the conference was more concerned with identifying trade-offs between environment and development than with promoting harmonious linkages between the two"(Dillion ,2019). Even UN documents acknowledged after the Stockholm conference that little was accomplished to concretely integrate environmental concerns into development policies and plans. A more integrated perspective that incorporated both economic development and environmental sensitivities was clearly needed.

In 1983, the UN General Assembly created the World Commission on Environment and Development which was later known as the Brundtland Commission, named after its Chair, Gro Harlem Brundtland, then Prime Minister of Norway and later head of the World Health Organization. In 1987, the commission published the Brundtland Report, entitled '**Our Common Future'**. It built upon what had been achieved at Stockholm and provided the most politically significant of all definitions of sustainable development: " sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The definition contains two major concepts: firstly, the concept of '**needs**', in particular the essential needs of the world's poor, to whom overriding priority should be given; and secondly the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs (Singh, 2016) and (Moga., Bala, & Dantsoho, 2023).

In that period, the concept of sustainable development acquired political momentum " through rising public concern in the developed countries over the new and alarming phenomenon of global environmental change, and in some ways it replaced fears of nuclear war that had prevailed in the early 1980s".

Some critics argue that "the Brundtland Commission Report's discussion of sustainability is both optimistic and vague. The Commission probably felt that, in order to be accepted, the discussion had to be optimistic, but given the facts, it was necessary to be vague and contradictory in order not to appear to be pessimistic" (Bartlett, 2006).

The year 1992 also featured prominently in the evolution of the concept of sustainable development. In this year, the UN Conference on the Environment and Development (UNCED), was held in Rio de Janeiro, Brazil, with an unprecedented attendance of 114 heads of state, including 10,000 representatives from 178 countries and 1400 nongovernmental organizations represented by additional thousands.

The conference itself proved to be an international event on an unprecedented scale as heads of government tried to make their mark on what was dubbed the Rio Earth Summit. The association in the title " Connecting Environment and Development, was indicative of North-South bargaining at the UN, in which demands for international action on the environment, were set against claims for additional development aid and technology transfer"(Singh, 2016). The major outputs of the conference were: the Rio Declaration, Agenda 21173, and the Commission on Sustainable Development. All were quite explicitly concerned with sustainable development and it is thus, at the conclusion of the Earth Summit that the concept truly arrived at the international scene.

The commitment of leaders from around the world to sustainable development was clearly articulated in Agenda 21, the key document of the summit- a 500 paged collection of agreed healthy practices and pieces of advice for achieving sustainable development in almost any area on the surface of the earth. Agenda 21 activities are organized under environmental and development themes: quality of life, efficient use of natural resources, protection of the global commons, management of human settlements, and sustainable economic growth. It recognizes that the persistence of severe poverty in several parts of the world alongside a standard of living based on wasteful consumption of resources in other parts is not a sustainable model, and that environmental management must be practiced in developing and industrial countries alike.

During the 1992 conference, it was agreed that to implement Agenda 21, countries should prepare a national sustainable development strategy (Singh, 2016). While sustainable development was conceived as a unifying principle during the Rio conference, there was disagreement about its meaning and implications. The UNCED process attempted to provide guidance in implementing sustainable development by laying out a set of principles and a plan of action based on the concept. Indeed, Rio was less about debating the definition of sustainable development than it was about developing approaches to ensure its implementation. Some critics argue that " implementing the principles of equity and living within ecological limits can only be accomplished if social, political, and economic systems have the flexibility to be redirected toward sustainability as well as integrated with each other and the environment" (Singh, 2016).

In the 1997 Kyoto conference on climate change, developed countries agreed on specific targets for cutting their emissions of greenhouse gases, resulting in a general framework, which became known as the Kyoto Protocol, with specifics to be detailed over the next few years. The U.S. proposed to stabilize emissions only and not to cut them at all, while the European Union called for a 15 % cut. In the end, there was a trade off, and industrialized countries were committed to an overall reduction of emissions of greenhouse gases to 5.2% below 1990 levels for the period 2008-2012. However, the complexity of the negotiations created considerable confusion over compliance even after the Kyoto Protocol itself as adopted because it only outlined the basic features for compliance but did not explain the all- important rules of how they would operate. Although, 84 countries signed the protocol, indicating the intent to ratify it, many others were reluctant to even this step.

Unfortunately, the USA has refused to ratify the Kyoto Protocol. The EU has ratified the Kyoto Protocol but this has not been enough. The Union has failed to reduce CO2 emissions. In relation to 1990 figures, the US's contribution to CO2 emissions is most likely to increase by 50%, compared to an 18% EU increase (Singh,2016). The Kyoto conference remains one of the most debated international agreements between the "greens" and the neo-liberals".

In September 2000 at the Millennium Summit held in New York, world leaders agreed on the Millennium Development Goals, most of which had the year 2015 as a time-frame and used 1990 as a benchmark. The Millennium Development Goals demonstrate that " the livelihoods and well-being of the world's poor are now conceptualized in terms of access to opportunity and absence

of insecurity and vulnerability" (Adger,2007). They represent a more practical expression of the principle of equilibrium between the economic, social and environmental pillars of sustainable development. They include (i) having the proportion of people living on less than a dollar a day and those suffering from hunger, (ii) achieving universal primary education and promoting gender equality, (iii) reducing child mortality and improving maternity health, (iv) reversing the spread of HIV/AIDS, (v) integrating the principles of sustainable development into country policies and (vi) reducing by half the proportion of people without access to portable drinking water. It is heartbreaking that even with the laudable pillars, the world still has to tackle " this dangerous blend of indifference (Gorbachev, 2006).

The World Summit on Sustainable Development (WSSD) in Johannesburg in 2002 was a landmark in the business of forging partnerships between the United Nations, governments, business and NGOs to gather resources for addressing global environmental, health and poverty challenges. The Johannesburg Summit reconfirmed the Millennium goals and complemented them by setting a number of additional ones such as halving the proportions of people lacking access to basic sanitation; minimizing harmful effects from chemicals; and halting the loss of biodiversity. As opined by (Asefa,2005), the Johannesburg Conference was apt in different ramifications: (i) the conference was a progress in moving the concept of Sustainable Development toward a more productive exploration of the relationship between economic development and environmental quality, (ii) the WSSD filled some gaps in the Agenda 21 and the Millennium Development Goals and addressed some newly emerging issues, including to halve the proportion of people without access to basic sanitation, (iii) to use and produce chemicals in ways that do not lead to significant adverse effects on human health and the environment; (iv) to maintain or restore depleted fish stocks to levels that can produce the maximum sustainable yields on an urgent basis.

The Johannesburg Conference confirmed a trend, which appeared since the 1992 Conference, of the increasing importance of the socio-economic pillars of sustainable development. The environmental agenda of the two previous UN conferences had been sustained by peaks in the public 'attention cycle' of major developed countries. The WSSD incorporated the concept of sustainable development throughout its deliberations and was initially dubbed "the implementation summit" (Singh, 2016).

Diagrammatic View of the Sustainable Development Goals

Source:https://www.researchgate.net/figure/The-17-Sustainable-Development-Goals-SDGs_fig1_339653671

Challenges of Sustainable Development in Nigeria

One of the key challenges to sustainable development in Nigeria is the readiness and ability of the Nigeria government to evolve and judiciously implement policies and programmes that can significantly free Nigerians from the shackles of abject poverty. Many Nigerians still wallow in abject poverty and perhaps do not receive sufficient nutritious diet to alleviate diseases. To achieve sustainable development, the following factors has to be urgently addressed:

a. Abject Poverty

Abject poverty must be tackled to enable the underprivileged the opportunity produce or purchase food, clothing and housing necessary to ensure health and self-respect. Ending abject poverty in Nigeria therefore calls for improved access to education, healthcare, clean water, and sanitation (Ukertor and Vambe, 2018).

B. **Degraded Agrarian and Production Environment**

Another obstacle to sustainable development in Nigeria is the threatened and degraded agrarian and production environment evident by poor leadership, mismanagement and pauperization of the populace and inconsistent policies that have taken a great toll on the environment. For instance, Nigeria's Niger Delta area has been in the news. The nation's mangrove forests are being destroyed following poor exploitation of crude oil and gas in the region. The agrarian system in the area is being destroyed. Against this backdrop, the region has to depend on other regions for food supplies. Again, the nation has to forgo most of the rubber and oil-palm plantations. Clearly, this depicts the lapses of uncoordinated policy formulation reminiscent of poor leadership.

C. **Deforestation**

This is another challenge hindering the achievement of sustainable development in Nigeria. Deforestation can lead to a number of environmental maladies that over time can greatly lower agricultural yields and increase rural hardships. For example, clearing of vegetation at high elevations has the potential to increase the exposure of cultivated lands at lower attitudes. Soil that has been carried away by heavy rains may silt rivers and pollute drinking water. Plants help to retain rainfall, which percolates down through the soil into underground reserves of groundwater. The water in turn tapped by a variety of plants during dry seasons in arid regions. The subsequent drop in the water level also leads to the death of plants with shallow root systems, including young trees (Ogujiuba, Ehigiamusoe and Udefuna, 2013). In Northern Nigeria, desertification processes are prevalent, and coupled with heavy fuel wood harvest, poor farming techniques and annual bush burning, the land is being destroyed. In eastern Nigeria, heavy gully erosion coupled with overpopulation prevail. The results have been failing rural and agrarian sector, mass poverty of the rural populace, heavy food importation, poor implementation of agrarian policies and indeed a mass of bandits emerging from the rural areas.

D. Societal Greed for Quick and Cheap Money

Even for the industrial and modern sector environments, the society's greed for quick and cheap money has led to abandoning of standards especially as seen in the emission of toxic materials into the environment. Sub-standard goods are being produced and imported, thus in Nigeria, it is not so much the quality of life that is at risk but everything that has to do with our existence as a nation.

E. **Anti-Development Activities**

Also worthy to mention as obstacle to the quest for sustainable development in Nigeria are instances of anti-development activities such as the constant feud between the Executive and Legislature arms of government both at the Federal and State levels, disrespect for the rule of law and the constitution, poor welfare package, and visionless leadership (Ukertor and Vambe, 2018).

F. Intra-Tribal and Inter-Religious Crises

Other instances are inter-tribal as well as inter-religious crises that prevail in most parts of Nigeria. Some glaring examples of such crisis include: the Kaduna crisis in 2000, the Tiv/Jukun crisis in Taraba State in 1999, and the Jos crisis in 2004. Arguably, more financial and material resources are wasted and economic activities were brought to a halt during such period in question. This in turn affects sustainable development in the country.

G. Global Economic Crisis

The financial crisis that occurred during the post-corona virus also features as one of the numerous issues that affects sustainable economic development. Take for example the downturn in the United States and its impact on other nations which Nigeria was not an exemption during the period. As a result of the interconnectedness of world trade, there are many synergies between nations around the world, hence what affects one country can also impact another indirectly (Blogger,2022).

H. Rapid Population Growth

in Nigeria, this is another fundamental challenge to the nation`s sustainable development agenda. Nigeria's population has been experiencing astronomically growth rate since the early 1990s and this has great consequences on sustainable development in the country. This rapid population growth has put a lot of stress on the nation`s ecosystem. Issues such as food security, land tenure, environmental degradation and lack of water supply are often related issues of high rates population growth in Nigeria (Ogujiuba, Ehigiamusoe and Udefuna, 2013). Continuing on our

present part of acceleratory environmental degradation would severely compromise the need ability of present and future generations to meet their needs.

I. **Rapid Urbanization/ Urban Development**

This is another challenge to sustainable development in Nigeria. The majority of Nigeria's population growth is concentrated in the urban areas largely due to rural-urban migration. It is important to note that the rapid population increases accompanied by heavy rural migration often leads to unprecedented rates of urban population growth, sometimes at twice the rate of national growth. The resulting environmental ills pose extreme health hazards for growing numbers of people exposed to them. Such conditions threaten to precipitate the collapse of the existing urban infrastructure and create circumstances ripe for epidemics and natural health crises. Congestion, vehicular and industrial emissions, crime rate increase, and poorly ventilated household stoves also inflate the tremendously high environmental cost of urban crowding.

J. **Lack of Accountability Among Public Employees**

Also considered as a challenge to sustainable development in Nigeria is lack of accountability among public employees; despite the huge reliance on crude oil and natural gas for economic growth, the government has failed to ensure a proper accountability framework for the sector to be accountable in terms of revenue derived. The implication of poor accountability culture by public officials on nation's quest for development is that public resources meant for development are often diverted for individual use, which hinders sustainable development in the country (Olamilekan, 2021). Closely linked to the aforementioned point is the high cost of governance. It is observed that about 70% of the government revenues are spent on the government itself, while only less than 20% of the country's population benefit significantly from the government's revenue.

K. Poor leadership

Poor leadership also takes a greater portion of the challenges to sustainable development in Nigeria. Government lacks the capacity to perform, which is rooted in a lack of ability to innovate and harness available resources. Besides, those in leadership position appears to have no regard whatsoever to the principles of good governance- openness, transparency, accountability and the rule of law; which together form the crucial factors that foster sustainable development in any

nation. Hence, the lack of an open and accountable government has paved the way for corruption and bad governance where public resources are being routinely misappropriated at the expense of the masses.

Strategies for achieving sustainable development in Nigeria

One of the strategies is that policies and programmes designed to address the challenges of sustainable development should be comprehensive and integrating all stakeholders. There should be greater involvement and participation of Non-Governmental Organizations (NGO's). Civil Society organizations and community groups in local governance, greater transparency and accountability in both planning and implementation of local policy and the devolution of responsibility for urban affairs from state or national level to the local level are inevitable, as the challenges of sustainable development can only be dealt with in an atmosphere of peace, better leadership and freedom, especially in a politically frayed and frazzled country as Nigeria.

Another strategy is that Nigeria could go the way of Europe by establishing the Sustainable Development Trust Fund; the policy trust could be to establish a national body/agency with a management tool and point of reference that will help it assess the progress that is being made in mainstreaming sustainable development in the three-tripartite aspects of Nigeria's national life. The wisdom behind the establishment of the Sovereign Wealth Fund is laudable as it strives to retain some funds for the nation's future generation, but it did not make provisions for social and environmental sustainability. The aims and objectives of the plan could be patterned in a manner to help ensure that the Nigeria sustainable development programme comply with structural fund regulatory requirements concerning sustainable development and the environment.

Much more importantly is for the government to fulfill its commitments to promoting sustainable development through a dual approach to mainstreaming. Ultimately, the mainstreaming approach should help ensure certain key strategic priorities such as promoting work and skills which are delivered in a way which minimizes any negative impacts on the economy, social and environment by sustainable Development Trust Fund (SDF). This should also maximize positive impacts. In addition, the mainstreaming approach should help to support a number environmental projects which promote jobs or skills. In the operational context of SDF, sustainable development could be seen as development which provides opportunities to allow everyone fulfill their potentials, social

justice, environmental protection and the skills that businesses demand and require – now and in the future (Ogujiuba, Ehigiamusoe and Udefuna, 2013).

There is also the need for urban regeneration and enhanced infrastructural development. As the population of an urban centre increases, its need for infrastructure such as transportation, water, sewage and facilities such as housing, commerce, health, schools, recreation and others increases (Ogujiuba, Ehigiamusoe and Udefuna, 2013); therefore, increasing the environmental carrying capacity of the urban areas is necessary for enhancing the live ability of cities in Nigeria. Massive rehabilitation and expansion of urban infrastructure in the country should be taken more seriously. This should be done to address the challenges of urbanization, urban governance, land management and shelter in Nigeria. The issues of poverty (rural and urban) and sustainable urban cities should continue to receive the attention of the government, just as the political will and commitment to formulate and implement programmes and policies for development planning, housing, infrastructural development and urban management should be accelerated.

Another strategy of achieving sustainable development in Nigeria is to practice waste reduction and recycling. Reducing waste and implementing recycling practices are pivotal steps in fostering sustainability. By adopting a waste reduction approach that includes recycling, reusing items, composting, and favouring products with minimal packaging, individuals and communities contribute significantly to lessening their environmental impact. Recycling materials such as paper, plastic, glass, and metal reduces the volume of waste sent to landfills and conserves resources by turning used items into new products. Additionally, reusing items and composting organic waste minimizes landfill contributions and enriches soil health for agriculture. By advocating and participating in these waste reduction strategies, individuals actively contribute to a more sustainable future, conserving resources, reducing pollution, and lessening environmental impact (Emily, 2023).

Support sustainable agriculture; promoting sustainable agriculture involves championing local and organic farming practices and prioritizing environmental health and biodiversity. By supporting local farmers committed to organic methods, we advocate for reducing harmful chemicals and pesticides in food production. These methods not only benefit the immediate environment but also enhance the nutritional quality of the produce. Organic farming preserves soil integrity, allowing for increased soil fertility, moisture retention, and long-term sustainability. By steering away from

chemical fertilizers and pesticides, local and organic farming practices encourage the growth of diverse ecosystems, protecting and fostering biodiversity. This approach supports the natural habitats of various species, promoting a healthier and more balanced environment. Supporting sustainable agriculture benefits the quality of our food. It also plays a pivotal role in conserving our planet's ecosystems and resources, ensuring a more resilient and harmonious relationship between agriculture and the natural world.

Educate and raise awareness, informing and engaging communities about the importance of sustainable living fosters understanding and collective action. Education on environmental issues and sustainable practices is key in this regard. Also important is that of ensuring gender equality and providing women and girls access to education and healthcare which is certain to lead to more sustainable communities and economic growth. Furthermore, there should be adequate investment on innovation. Thus, supporting research in sustainable technologies and practices can lead to significant advancements in achieving environmental and social goals.

One other way to achieve sustainable development in Nigeria is to advocate for responsible policies. Government should encourage businesses to adopt sustainable policies, including regulations supporting renewable energy, emissions reduction, and environmental conservation. Also important to achieving sustainable development in Nigeria is the need to embrace renewable energy sources such as solar, wind, and hydroelectric power. Embracing these renewable energy alternatives lessens the environmental impact associated with fossil fuel extraction and combustion and promotes energy independence and sustainability. By reducing reliance on finite and environmentally harmful resources, integrating renewable energy sources fosters a cleaner, greener future while aligning with global efforts to mitigate climate change, ensuring a more resilient and sustainable planet for current and future generation.

Conclusion

This paper sees sustainable development as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Ecological integrity and sustainability, equity and distributive justice at all levels, socially –relevant economic productivity and technological development, popular participation and collective autonomy and

prevalence and institutionalization of human development were identified as the key features of sustainable development.

The first International Conference on sustainable development took place in Sweden in 1972. Among the challenges of sustainable development considered in this study include; the readiness and ability of Nigeria government to evolve and judiciously implement policies and programmes that can significantly free Nigerians from the shackles of poverty, the threatened and degraded agrarian and production environment, deforestation, global economy crisis, the rapid population growth e.t.c.

On strategies of achieving sustainable development in Nigeria, the following issues were identified and discussed; greater participation of Non- Governmental Organizations in the implementation of local policy and devolution of responsibility, establishment of Sustainable Development Trust Fund, fulfillment of government in promoting sustainable development through dual approach, urban regeneration and enhanced infrastructural development e.t.c.

References

Adger, N. & Alexander, W. (2007). *Vulnerability, Poverty and Sustaining Wellbeing*, published in Handbook of Sustainable Development, Edward Elgar Publishing Limited, Cheltenham.

Bartlett, A.(2006). Reflections on Sustainability, Population Growth, and the Environment, Dordrecht: Springer.

Blogger, P.P. (2022). 'Sustainable Development: Challenges and Opportunities'.www.plasticcollective.co. Accessed 30 January 2024.

Cameron, J.(1993). " The GAIT and the Environment" in Olewa, B.N.(1995), *Development Administration*, Aba: Grace Books.

Dillion, A. (2019). "The Origins and Evolution of Sustainable Development Concepts" www.linkedin.com Accessed 28 September 2023. "Economic Sustainable Development" n.d. Edited from: https://www.ykliitto.fi/ykteemat/kestava-kehitys. Accessed 17 August 2023

Emily, G.(2023). " 10 ways to achieve Sustainable Development". www.sigmaearth.com. Accessed 30 January 2024.

Gorbachev, M.(2006). *A New Glasnost for Global Sustainability,* Dordrecht: Springer.

Idisi, P.O.(2002). Economic Development and Good Governance: Issues for Sustainable Development in Nigeria, *Abuja Journal of Administration and Management, Vol.1, No.1*.

Moga, E., Bala, M. B. & Dantsoho, M. A.(2023). The Application of E- learning in History for Sustainable Development: Nigeria in the 21st Century, *International Journal of African Innovation & Multi Disciplinary Research,* 2(1),pp.163-169.

Ndubuisi- Okolo, P.U. &Anekwe R.I.(2018). Strategies For Achieving Sustainable Development in Nigeria, *International Journal of Academic Research in Business & Social Sciences,* 8(6),pp.182-184.

Offiong, D.A.(2001). *Globalization: Post-Neo dependency and Poverty in Africa,* Enugu: Fourth Dimension publishers.

Ogujiaba, K., Ehigiamusoe. U.K & Udefuna, P. (2013). The Challenges and Implications of Sustainable Development in Africa :Policy Options for Nigeria, *Journal of Economic Cooperation and Development,* 34(4), pp.84-90.

Singh, S.K. (2016). " Sustainable Development : A Literature Review" ,*The International Journal of Indian Psychology, Vol.3, No.6,* http://www.ijip.in.

ASSESSMENT OF THE EFFECTIVENESS OF GUIDANCE AND COUNSELLING SERVICES AMONG SENIOR SECONDARY SCHOOLS IN GOMBE METROPOLIS, GOMBE STATE

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Abstract
This paper assessed the effectiveness of Guidance and Counselling Services in Secondary Schools in Gombe Metropolis, Gombe State. The objective of the study was to assess the adequacy, *quality and services of guidance and counselling in Senior Secondary Schools, Survey research method was employed. The target population of the study was twenty-five (25) Senior Secondary Schools within Gombe metropolis. Simple random sampling (SRS) method was used to select 165 teachers out of four hundred and forty (442) teachers across the selected Senior Secondary Schools randomly. Questionnaires was the main instrument for data collection. Mean score was used for data analysis. Findings from the study revealed that secondary schools in Gombe Metropolis, lacked adequate and qualified guidance counselors in their Schools and inadequate and quality guidance counselling facilities. It was also discovered that guidance counselling services were not adequate in the secondary schools within the Gombe Metropolis. From the findings of the study some recommendations were proffered to improve the Guidance and Counselling services in the schools such as adequate number of qualified guidance counselors should be employed by government and guidance and counselling facilities should be procured in all the secondary schools in Gombe Metropolis. The study also recommends that Inspectors from the Inspectorate division of the state ministry of education should regularly pay visit to schools to closely monitor the activities of the counselors, this will encourage them to improve upon their responsibilities.*

Keywords: Effectiveness, Guidance and Counselling, Services, Senior Secondary Schools, Gombe Metropolis

Introduction

Worldwide, students experience social, personal and academic problems at schools and at homes. The problems include living in distressed family, for example, where parents are separated or

divorced, where conflicts occur and where disease such as Human Immunodeficiency Virus/Acquired Deficiency Syndrome (HIV/AIDs) are rampant. These problems negatively affect the students in their school endeavours, (FLEHI, 2009).

A good number of student engage in drug, prostitution, truancy, indiscipline and other misdemeanours (Robinson, 1991). The outcome of the above problems is summarized by Lines and Davies (2003), who view the school as bee hive of activities where teenage difficulties and peer group tension arise. In the light of these problems, schools should be more involved in conducting students' need assessments and developing comprehensive guidance and counselling services (Kamran,2019) Nziramanzaga (2009) posits that because of many pressures imposed on the families, parents tend to have little time with their children to give them the necessary guidance. The parents expect the school to provide solutions to their children's indiscipline in secondary schools. Paisdly (2001) calls for schools' guidance and counselling to be restructured so that they become responsive to the existing social economic and political realities within today's complex and diverse society.

Research has demonstrated high prevalence of risk taking behaviour among adolescents who attend secondary schools. Okechukwu O. (2010). Students in the adolescent age bracket experience rapid growth and changes, physically, intellectually, emotionally and socially (Robinson, Linderman 1991) found that rapid developmental changes occur at a time when environmental stress occur. For example, parents and teachers pressures on young people to excel in school, peer pressure to experiment with drug, conflict in families or poor relationship, loneliness and pressure to make career choices are at peak.

According to (Gysbers and Henderson 2001) it seems as though many educators take it for granted that students know how to succeed in life, when in fact many never learn about attitude, behaviours and other factors that contribute to success in life; and guidance and counselling services to student to cultivate attitude and behaviours leading to success in life is very important. Otwell and Mullis (1999) believe that guidance and counselling is important in schools because it increases behaviour related to achievements such as studying effectively.

In rural areas of some of the villages for example, many students drop out of school as a result of poor performance in academic grade and failure to adjust to high school learning situations. A student who loses confidence in his or her ability and who devalues himself lacks concentration and this leads to academic failure. (Rectondoki, 2001).

Statement of the Problems

It has been noted that students face a number of problems during adolescence. Since secondary school students are in the adolescent stage, the need for effective guidance and counselling becomes compelling. Thus there is need to establish the effectiveness of services from schools' counselors and students.

In addition, the view of the school as a context where students experience a number of problems (Line in Daries 2003) as well as the increased number of problems students face in modern society

have prompted the researcher to investigate the effectiveness of school guidance and counselling services in Gombe metropolis, Gombe Local Government's secondary schools.

Historical Review of the Development of School Guidance and Counselling Services

Guidance and counselling in school was introduced for different reasons in different countries. Schmidt (1997) stated that school guidance and counselling services began in America in the early 1900s to assist students with their educational development and career aspiration. He further stated that the negative effect of industrial growth and corresponding neglect of human conditions necessitated the introduction of school guidance and counselling services in the USA. Schmidt (1993) stated that an increasing population of students entering schools necessitated the introduction of school guidance and counselling services, after the 1900s, the world wars were the next major events that had an impact on the development of school guidance and counselling services. It arose as a response to social crises brought about by the wars. Student needed counselling services to overcome the traumatic war experiences they had under gone together with their families, relatives and friends.

In Britain, school guidance and counselling was introduced in reaction to the changes in societies in family life and in school which created conditions where greater attention to individual needs was necessary (Taylor 1971). He further stated that social pressure from urbanization, decline in family tradition and the industrial revolution led to the introduction of school guidance and counselling services development. In urbanization and the industrial revolution created turbulence among students who were studying under higher anxiety levels as competition levels had becomes stiffer. They had pressures to choose careers. Owing to these factors, vocational counselling came in handy to keep them in their vocational plans.

In Hong Kong, the school guidance counselling services were introduced in 1950s because of the "increased variation in children's background, increase developmental, personal and social problems, and lack of motivation toward schools, disruptive behaviours in classrooms and the rise in juvenile delinquency. (Brennan 2004). The school guidance and counselling were introduced to help students overcome the above problems and this led to better school adjustment and improved academic achievement.

In Israel. School guidance and counselling was introduced in 1960 Kungman and Ajzen (1985). It was introduced to cater for students' career needs and learning disabilities.

In South Africa, school guidance and counselling was introduced to the white and colored South African schools in 1960. Euvrand (1992). Manson (1985) argued that guidance and counselling was introduced in black South Africa schools in 1981 as a social control measure aimed at nurturing a spirit of submission among black learners. It was also seen as an instrument for government imposition of religious, cultural and vocational ideologies and value systems.

Guidance and Counselling Services in Nigeria

School guidance and counselling in Nigeria commenced in 1958. That year the Calotte Sisters of St Theresa's College, Ibadan recognized the need to give adequate careers or vocational guidance to their final year students. Dr. C. I. Bercpiki was the first vocation guidance officer appointed by the Federal Ministry of Education Lagos, in 1961. Currently the unit is well manned by trained professional counselors. In 1967, Mr. Rees, an American, introduced guidance and counselling in secondary schools successfully at comprehensive high school, Aiyetoro, Ogun state and formed the CASSON i.e (Counselling Association of Nigeria). The Federal Government has inserted the need for guidance and counselling in Nigerian schools in its National Policy on Education (2004) this has helped to make all the state government to establish guidance and counselling units in their Ministries of Education. Suffice to say that, although the guidance and counselling is a relatively new comer to Nigeria education scene, it is gradually making its impact. It is still evolving.

Types of Guidance and Counselling Services

Guidance is a process by which individuals are assisted in making adequate adjustments to life's situation. It lets people know their abilities, aptitudes, interests, perceptions and limitations. Guidance is classified into 3 types which are Educational Guidance, Vocational Guidance and Personal Guidance.

a. **Educational Guidance**

   The teacher provides this type of guidance to students for their educational problems. This type of guidance is used to choose the subjects in school, identifying the cause of failure faced by the student by diagnostic tests in study subjects.

b. **Vocational Guidance**

   This type of guidance is given to individuals for choosing a job or to clarify problems in certain jobs. Different types of tests are used in this type of guidance like Differential aptitude tests, Intelligence tests and aptitude tests, personality and interest inventories and Achievement and scholastic aptitude tests.

c. **Personal Guidance**

   This type of guidance is provided for the personal problems of the individual or other related problems. The problems can be family and home problems, emotional adjustment and anxiety or curiosities, financial or economic problems etc.

Counselling

Counselling is a talking / oral therapy, it allows people to discuss their troubles with trained professionals in a peaceful ambience. It is generally a process where individuals talk about their issues to overcome their problems. Counselling can be of different types, let us discuss each type in detail:

a. **Career Counselling**: In this type of counselling, aspirants are given career guidance and the counsellor shows the individual the right path which will lead to a bright future in their area of interest.

b. **Mental Health Counselling:** In this type of counselling individuals who are going through emotional distress are given support. counselors try and provide ways to overcome the situation that person is facing and nurture their well-being.

c. **Relationship Counselling:** It is also known as couple's therapy. People seek this type of counselling when they have problems related to their love or marriage life. A therapist helps couples to overcome their problems and enter into a long-term commitment.

d. **Rehabilitation Counselling**: This type of Counselling helps people with disability to fulfil their goals and lead an independent life. The counselors support the concerned people to overcome psychological disabilities.

The Need for Guidance and Counselling

Life presents us with various choices and challenges, ranging from academic and career decisions to personal relationships and mental well-being. These situations can be overwhelming, and without proper guidance, individuals may struggle to make informed choices. Professional guidance counselors offer valuable insights, helping individuals explore their interests, talents, and strengths to make well-informed decisions for a fulfilling life.

i. **Support Personal Growth**

Guidance and counselling are not only about addressing problems; they are also instrumental in fostering personal growth. counselors' work with individuals to identify areas of improvement, set realistic goals, and provide strategies to achieve them. This process aids in building self-awareness , self-esteem, and confidence, which are vital attributes for personal development.

ii. **Empower Academic and Career Decisions**

For students and young adults, guidance and counselling are especially crucial in making academic and career choices. counselors can assess students' interests, aptitudes, and learning styles, guiding them towards the right educational path. Additionally, career counselling helps individuals explore various career options, equipping them with the knowledge and skills needed to succeed in their chosen fields.

iii. **Coping with Life Transitions**

Life is full of transitions, such as changing jobs or facing the loss of a loved one. These transitions can be challenging to navigate alone, and guidance counselors provide the

support needed during these times of change. They offer practical strategies to cope with transitions, helping individuals embrace new opportunities and adapt to change positively.

Benefits and Availability Guidance and Counselling Services

Guidance and counselling are integral aspects of personal growth and empowerment. By offering support, understanding, and direction, counselors play a significant role in helping individuals overcome challenges and make informed decisions. Through counselling, individuals can foster self-awareness , develop resilience, and build positive relationships, ultimately leading to a happier and more fulfilling life, Support Personal growth, Empower Academic and Career Decisions.

a. **Personal Social Benefit**: Euvrard (1996) points out that effective Nigeria secondary school guidance and counselling services acts in a preventive way and equip students with information skills and attitudes which enable them to successfully negotiate the challenges of adolescence. Adolescents are helped to develop social skills in getting along personality or social maladjustment.

b. **Scholarly and Academic Benefit**: Wison (1985); Myrick and Dixon (1985) found that classroom guidance lessons led by counselors can "positively influence academic achievement in Mathematics'' Huil (1998) reports similar experience in Hong Kong. Border & Drudry (2002) cited studies that show increased academic achievement, academic persistence, school attendance and positive attitude towards school and others as a result of effective guidance and counselling service.

c. Career and Vocational Benefit:

Hartman (1999) stated that students who received vocational guidance and counselling developed decision making skills to the point of being capable of making real choices from short term to long term. That is students are assisted in assessing their aspiration, values, interest and aptitudes when making career decisions and plans.

Roles of School counselors

Schmidt (1997) states that school guidance and counselors roles are presented around the following themes:

(i) Education development role,
(ii) Career development role,
(iii) Personal social development role and
(iv) Referral role

(i) **Educational Development Role:** counselors assess student's abilities and provide services for parents to learn about their students and progress, in Nigeria Secondary schools. The counselors help the students to improve their studies and attitudes so that they realize their best potentialities. Schmidt (1997).

(ii) **Career Development Role:** The school counselors provide students with experiences that increase knowledge of occupation, training data, life styles, employment seeking skills, decision making strategies and above all, knowledge of self. Ahia and Bradley (1984) Lament that Nigeria students have career needs that can only be effectively met by school counselors rather than parents or relatives. Schmidt (1997)

(iii) **Personal Social Development Role:** The school counselors help the students with their normal physical, intellectual, emotional and social development. The students are taught about physical changes in their bodies and communication skills to help them develop friendship and relate more effectively to their peers, parents and teachers. Schmidt (1997)

(iv) **Referral Role:** some students' problems are beyond the capability of the school counselors and in such cases the school counselor's role is to establish a referral network Schmidt (1997).

Purpose of the Study

The purposes of the study are;

i. To examine the adequacy and quality of guidance and counselling personnel in Government secondary schools in Gombe Metropolis, Gombe state
ii. To analyse the adequacy of guidance and counselling facilities in secondary schools in Gombe Metropolis.
iii. To evaluate the guidance and counselling services carried out in secondary schools in Gombe Metropolis,
iv. To find out the factors hindering effective guidance and counselling service in Gombe Metropolis, Gombe state.

Research Questions

The following research questions were formulated to guide the study:

i. Do secondary schools in Gombe Metropolis, have adequate and qualified school guidance and counselors?

ii. Are the guidance and counselling facilities in secondary schools in Gombe Metropolis, adequate in number and quality?

iii. What are the guidance and counselling services provided by secondary schools in Gombe Metropolis.?

v. What are the changes to effective guidance and counselling services in Gombe Metropolis.?

Methodology

Design of the Study: This study was conducted using descriptive survey research method. The method was found to be appropriate for the study because of its flexibility in the use of a sample when the population is large.

Area of the Study: This study assessed the effectiveness of Guidance and Counselling Services Senior Secondary Schools in Gombe Metropolis, Gombe State**.** Gombe metropolis is the main Gombe State capital and has shared boundary with Akko, Kwami and Yamaltu Deba local government areas. The major tribes of its citizen are Fulfulde and Hausa. The occupations of people in the metropolis are mainly civil servants, farmers and businessmen.

Population and Sample: The population of the study covered 165 teachers across the selected Schools of 442 teachers, therefore a multi stage sampling procedure was used to draw the sample size of 10 Senior Secondary Schools out of 25 schools, using Simple Random Sampling (SRS) method.

Instrumentation: The instrument that was used for data collection was the questionnaire. The questionnaire was made up of (2) two sections, namely section A and section B. Section A was for the personal data of the respondents and section B was for the main items derived from the research questions. Section B consisted of 20 items dealing with the assessment of the school guidance and counselling programme. The respondents were required to tick (✓) against each item to indicate their own opinion on the issues raised according to the four point likert rating scale. The scale ranges from strongly agree (SA), agree (A), Disagree (D) and strongly Disagree (SD), representing 4, 3, 2, and 1 respectively

Method of Data Collection: The questionnaire was administered to teachers in the selected Senior Secondary Schools. One hundred and seventy (170) questionnaire were distributed to the targeted respondents and one hundred and sixty five were retrieved successfully after completion.

Methods of Data Analysis: The data was collected and analyzed using mean. Responses to the questionnaire items were rated based on the 4 point scale. The 4 point rating was weighted thus, strongly Agree-4 point, Agree- 3points, Disagree-2 points and strongly disagree 1 point. The criterion reference mean of 2.5 was used to determine rejection and acceptance, any items whose means value is below 2.5 will be rejected and those whose mean value are 2.5 and above will be accepted. The descriptive statistics which include mean was used to answer the research questions.

Results

Research Question 1: Do secondary schools in Gombe Metropolis, have adequate and qualified school guidance and counselors?

Table I: The mean of student respondents on adequate and qualified guidance counselors.

S/N	*ITEMS*	*MEAN SCORE*	*REMARK*
1	My school has adequate Numbers of guidance counselors.	1.75	Disagreed
2	My school has qualified guidance counselors.	2.16	Disagreed
3	My school guidance counselors exhibit high sense of professionalism in the discharge of their duties	2.11	Disagreed
4	My school guidance counselors have sound personality	2.04	Disagreed
5	My School Guidance counselors have good interpersonal relationship Grand mean	3.04	Disagreed
	Grand mean	**2.23**	**Disagreed**

From the table 1: Items 1, 2, 3 and 4 have mean scores values of 1.75, 2.16, 2.11 and 2.28 respectively. Item 5 has a mean score of 3. 04 and a grand mean is 2.23. Therefore, with these revelations from the analysis, it is apparent that secondary schools in Gombe Metropolis, lacked adequate and qualified guidance counselors in their Schools.

Research Questions 2

Are the guidance counselling facilities in secondary schools in Gombe Metropolis, Gombe Local Government adequate in number and quality?v

Table 2: The mean respondents on adequate guidance and counselling facilities.

S/N	*ITEMS*	*MEAN SCORES*	*REMARK*
6	There is adequate consultation room in my school where student go for guidance counselling	2.22	Disagreed
7	There is a notice board where appropriate information are placed	2.04	Disagreed
8	There is an equipped career library where student can search for information in my school.	1.98	Disagreed
9	Guidance and counselling is included in my school daily routine time table.	3.10	Agree
10	The amount of time allotted for guidance and counselling in my school is students	2.20	Disagreed
	Grand mean	**2.27**	**Disagreed**

The table 2: Show mean scores of 2.22, 2.04, 1.98 and 3.01 for items 6, 7, 8, and 9 respectively. Item 5 has a mean score of 2.20 and a grand mean of 2.27. Therefore, with these revelations from the analysis, it is apparent that secondary schools in Gombe Metropolis, lacked adequate and quality guidance counselling facilities in their Schools.

Research Question 3

What are the guidance and counselling services provided by secondary schools in Gombe Metropolis, Gombe Local Government Area?

Table 3: The mean respondents on the guidance and counselling services provided

S/N	*ITEMS*	*MEAN SCON*	*REMARK*
11	Orientation services are organized for new students in my school	3.16	Agree
12	Career day/week are organized often to help expose the students to the world of work.	1.07	Disagree
13	Guidance counselors through psychological testing determine the appropriate career suitable for student in my school.	1.01	Disagree
14	Guidance counselors always invite problem students for counselling in my schools.	1.48	Disagree
15	The students are aware of and regularly visit the guidance counselors office	1.11	Disagree
	Grand mean	**1.56**	**Disagree**

From the table 3: Items 11, 12, 13 and 14 have mean scores of 3.16, 1.07.1.01 and 1.48 respectively. Item 5 has mean score of 1.11 and a Grand mean of 1.56. Therefore, with these revelations from the analysis, it is apparent that secondary schools in Gombe Metropolis, lacked guidance counselling services in their Schools.

Research Question 4

What are the obstacles to effective guidance and counselling services in Gombe Metropolis, Gombe Local Government?

Table 4: The mean of student respondents on the obstacles to effective guidance and counselling services.

S/N	*ITEMS*	*MEAN SCORE*	*REMARK*
16	Lack of government support affect guidance and counselling services in my school	3.58	Agree

17	There is cordial relationship between the teachers and the guidance counselors in my school	2.00	Disagree
18	The teachers resent the presence of the guidance counselors in my school	2.12	Agree
19	The counselors' office is not conducive for free discussions.	2.98	Agree
20	Parent prefer teachers to counselors in handling their children	2.98	Agree
	Grand mean	**2.85**	**Agree**

Table 4: Shows the mean scores of 3.58, 2.00, 2.72 and 2.98 for items 16,17,18 and 19 respectively, item 5 has a mean score of 2.98 and grand mean 2.85. Therefore, with these revelations from the analysis, it is apparent that secondary schools in Gombe Metropolis, agreed with the obstacles to effective guidance and counselling services.

Discussion of Results

The results of the data analysis in table 1 showed that the respondents disagreed that there were adequate and qualified guidance counselors in secondary schools in Gombe Metropolis, Gombe Local Government as indicated with a grand mean is 2.23.

The resulted data analyses and grand mean of 2.27 for the respondents indicated that there were no adequate guidance and counselling facilities despite the fact that guidance and counselling was duly included in the school daily routine timetable. The findings in table 3 further revealed that the respondents disagreed that all the important services were adequately provided in secondary schools in Gombe Metropolis, Gombe Local Government Area.

From table 4 it could be seen that the respondent agreed that there were many obstacles obstructing the effective implementation of guidance and counselling service in Senior Secondary Schools in Gombe Metropolis.

The Implication of the findings is that there is significant deficiency in the implementation of Guidance and Counselling services in Secondary Schools in Gombe Metropolis, This affects students in deciding areas they will fit in, in order to maximize their potentials.

Conclusion

The study assessed the effectiveness of Guidance and Counselling Services in Secondary Schools in Gombe Metropolis, Gombe Local Government Area Gombe State. Based on the findings of the study, it can be safely concluded that there is significant deficiency in the implementation of Guidance and Counselling services in Secondary Schools in Gombe Metropolis, Gombe Local Government Area of Gombe State.

Recommendations

From the findings of the study, the following recommendations are apparent:

i. Adequate number of qualified guidance counselors should be employed by government, this will improve the effective guidance and counselling services in the study area and the state in general.
ii. Guidance and counselling facilities should be procured in all the secondary schools in Gombe Metropolis, Gombe Local Government Area to improve the guidance and counselling services.
iii. Training and retraining of counselors in secondary schools should be given priority so as to keep them abreast of the new innovation, this will enable them to deploy modern approach in providing effective services and it will be in line with the global best practice.
iv. The government should minimize the administrative delays in addressing problems/issues of councillors in the schools, this will reduce the obstacles faced in providing good services.
v. Inspectors from the Inspectorate division of the state ministry of education should regularly pay visit to schools to closely monitor the activities of the counselors, this will encourage them to improve upon their responsibilities

References

Borders, L.D. & Drury. S. M. (2002) Comprehensive School Counselling Programmes.A Review for Policy Makers and Practitioners.In *Journal of Counselling and Development* 70 (4). P.487-498

Euvrard, G. (1996) School Guidance – What do the Pupils Want? In *South Africa Journal of Psychology*, 22 (4), p.215-219.

FLEHI, (2009). UNESCO, Family Life and Emerging Health Issues Curricullum, Unesco/AHI Publication. www.healtheducationresources.unesco.org

Gysbers, N.C. & Henderson, P. (2001) Comprehensive Guidance and Counselling programmes: A rich History and a Bright Future. In *Professional School Counselling,* 4 (4), p-246-256.

Hartman, J. B. (ed) (1999) *Secondary School Counselling Manual*, Canada: University of Manitoba.

Hui, E.K.P. (1998) Guidance in Hong Kong Schools, Students' and tachers' Beliefs.In *British Journal of Guidance and Counselling*, 26 (3), p.435-448.

Kamran, K. (2019). The Importance of Guidance and Counselling in Secondary Schools: A case study of kachia local government, Kaduna State, Nigeria. A journal of psychology Education, yaliam press. P. 28-42

Kamean, N. O. (1980). The Evolution of Guidance and Counselling in Secondary Schools

National Policy on Education in Nigeria, (2004). Ministry of Education, Federal Republic of Nigeria

Nziramasanga, C.T. (2009) *Report of the Presidential Commission of Inquiry into Education and Training*. Harare: Government Printers.

Okechukwu Obianugu (2010) .A research work on Guidance and counselling, Department of Education Foundation, Enugu State College of Education Technical.

Otwell, P.S. & Mullis, F. (1997) *Academic Achievement and Counsellor Accountability in Elementary School Guidance and Counselling,* 31 (4), p.343-345.

Paisley, P. O. (2001) Maintaining and Enhancing the Development Focus in School Counselling Programmes.*In Professional School Counselling*.4 (4). P. 271-277.

Robinson, S.E. (1991) Peer counselors in a High School Setting: Evaluation of Training and Impact on Student. In *The School Counsellor*, 39, p.35-40

Rutondoki, E.N. (2000). *Guidance and Counselling*. Makerere University. Institute of Adult and Continuing Education

Schmidt, J.J. (1997) Critical Issues for School Counsellor Performance Appraisal and Supervision. In *The School Counsello*r, 38 (2), P.86-87.

ACCOUNTING EDUCATION PROGRAMME AND YOUTH EMPOWERMENT AMONG UNIVERSITY BUSINESS EDUCATION GRADUATE IN NIGERIA

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Abstract
The study was aimed at assessing the influence of accounting education programs in Nigerian University on youth empowerment in Edo State. The research was also guided by three specific objectives, three research question and three hypothesis. The research adopted a correlational research design while the population of the study was made up of a total of 877 respondents taken from three public universities in Edo state including Ambrose Ali University, Edo State University and University of Benin. A total of 269 respondents was selected as sample using the stratified random sampling technique. To test the hypothesis state, a simple regression and ANOVA associated with regression at 0.05 Alpha level of significance. Findings from the study reveals there is no significant relationship between accounting education program and youth empowerment. From the study it could be ascertained that other factors order than accounting education programs influence youth empowerment. The study concludes that despite the relevance of accounting education in the life of youth seeking empowerment, it may not be an effective means for addressing youth unemployment and wealth creation. The study concluded among others that there should be promotion of a more diversified education system that includes vocational training, entrepreneurship and other business related field in addition what accounting curriculum tends to offer and promote.

Keywords: Accounting Education, Youth Empowerment, Business Education, Nigerian Universities

Introduction

Many Nigerian youths are presently jobless which has become a major problem in the society including Edo State. It is a serious problem when youths graduate from school only to find nothing to do. Many of them due to their predicament and frustration indulge in crime activities for survival. Young people in Benin today are conscientiously investing in formal education to attain higher academic qualifications such as Ordinary National Diploma (OND), Higher National Diploma (HND), First Degree (B.Sc./B.Ed/B.A), Master's Degree, Doctor of Philosophy (Ph.D).

The idea of educational advancement is hinged on the assumption that the higher the educational attainment of an individual, the higher his chances of succeeding faster. It is also necessitated by the fact that as people progress on their job, they begin to face tasks and responsibilities that their basic educational attainment did not adequately prepare them for (Ameh, 2012). Youths who enroll and complete higher educational programmes are truly advancing educationally. The teaming population of youths enrolling and completing advanced educational programmes across the three major institutions of higher learning in the city of Port Harcourt point to the fact that youths are advancing educationally. Youths in Port Harcourt City also advance professionally. Professional advancement within the context of this work refers to movement of a worker to higher position or area of specialization, mastering the operations at a higher level, and being able to function work more efficiently and effectively on their job. Professional advancement is not just about obtaining a higher professional certificate in a field, it is about developing and maximizing higher specialized skills, attitude, and competencies of worker (The Charity Commission for Northern Ireland, 2013).

Unfortunately, the need to provide sustainable youth empowerment has frequently been considered from other dimensions other than Accounting Education. Accounting Education provides numerous financial skills required for the management and accountability of monetary and other resources needed in both entrepreneurial and large enterprises. It helps to prepare students for life after school, especially on the need for self-sufficiency, through entrepreneurship and job skills. The need for a functional accounting educational curriculum is therefore essential.

Statement of problem

Despite the significant investment in accounting education in Nigeria, the level of youth unemployment remains very high, and the impact of accounting education on entrepreneurship and wealth creation is unclear. This gap in knowledge represent significant problem in understanding the effectiveness of accounting education in empowering young people in the economy. It is against this backdrop that this research seeks to investigate the relationship between accounting education program in the Nigerian university and the level of youth empowerment in Edo State

Research objective

The main aim of this study was to ascertain the influence of accounting education program in Nigerian universities on youth empowerment in Edo State, Nigeria. Specific objectives include;

1. To ascertain the relationship between accounting education curriculum and job creation among youths in Edo State.
2. To ascertain the relationship between accounting education curriculum and wealth creation among youths in Edo State
3. To ascertain the relationship between accounting education curriculum and self-employment among youths in Edo State.

Research questions

The following research questions guided this study.

i. What is the relationship between accounting education curriculum and job creation among youths in Edo State?
ii. What is the relationship between accounting education curriculum and wealth creation among youths in Edo State?
iii. What is the relationship between accounting education curriculum and self-employment among youths in Edo State?

Research Hypotheses

The following null hypotheses were formulated to guide the study, Tested at $\propto = 0.05\ level\ of\ significance$

H_{01}: There is no significant relationship between accounting education curriculum and job creation among youths in Edo State.

H_{02}: There is no significant relationship between accounting education curriculum and wealth creation among youths in Edo State.

H_{03}: There is no significant relationship between accounting education curriculum and self-employment among youths in Edo State.

Conceptual framework: The Concept of Accounting Education

Accounting education incorporates a package of instructional programmes prepared to educate and enlighten "would be" accountants in the field of education, to make them versatile and adaptable to the numerous roles they may be required to play after graduation. It attempts to develop concepts, skills, rules, theories, procedures and general knowledge for solving accounting problems. It further emphasizes the ability to differentiate and integrate alternative problem solving perspectives, the ability to identify accounting related information resources, the ability to proffer solutions to problems, develop communication skills and the ability to analyze, interpret problem situations and figure out lasting solutions (Okafor, 2012).

Accounting education is a branch of education that teaches recording and maintenance of books of accounting by applying accounting principles. It assists individuals to master the different ways of recording different business transactions and events and ensuring that things are properly done (Sani, 2016). Hence, the goal of accounting education is to build competent and ethical professional accountants who are capable of eliciting a positive contribution over their lifetime to the profession and society in which they work.

Based on increasing changes that they will come across as professional accountants, it is necessary that students develop and maintain an attitude of learning to learn as well as maintain their competence later as professional accountants. Thus, accounting education curriculum should offer

a foundation of professional knowledge, skills, values, ethics and attitude to students which will help them to continue to learn and adapt to changes throughout their professional lives (Babalola & Tasikun, 2015).

These capabilities will assist professional accountants to identify problems, know where to find knowledge and how to apply it in an ethical manner to get appropriate solutions. The balance of these elements may vary but what is required is to develop the knowledge base, strong skills and ethical values in order to produce competent professional accountants with suitable values, attitudes and ethics.

Youth Empowerment

Youth empowerment is a process where young individuals are encouraged to take charge of their lives. They do this by addressing their situation and then take action in order to improve their access to resources and transform their consciousness through their beliefs, attitudes and values. It aims at improving quality of life and acquired through participation in youth empowerment programmes. There are numerous initiatives and models for youth empowerment programme that assist youths to achieve empowerment (Edralin, Tibon & Tugas, 2015).

Youth empowerment can equally be considered as a way of giving strength to the existing capabilities of youths in order for them to be more productive in their endeavors. It also connotes the development of mental and physical capacity, power and skills in youths for them to function meaningfully in their social milieu, thereby experiencing a more favorable level of social recognition and subsequently boost their economic status (Akomolafe, 2006). Youth empowerment extends a change of mind-set to incorporate a demonstration of that change which the world is forced to acknowledge and respond to. It should commence from within to involve learning about oneself from many perspectives and learning to develop one's rational and emotional resources to achieve desired ends. Empowering youths is conceived as awareness - building; in view of building capacities and developing skills required for continued decision-making and prospects (Dominique & Dominique, 2014).

An empowered youth is an individual who has transformed himself into a subject rather than an object; one who has access and control over resources such as land, assets and money. Such a person controls economic, health, social, cultural and psychological situations. Youth empowerment thus entails equipping youths through capacity building programmes (such as Accounting education) so that they can contribute meaningfully to themselves and their society (Nelson, 2011). In this view, it is important to understand properly who a youth is and how to empower him.

Teaching Aids and Pedagogy

For appropriate and effective teaching and learning outcome, accounting teachers require a wide range of teaching aids and instructional materials ranging from public address system, accounting,

projectors/slides, and packages to sophisticated multimedia facilities (Osisioma, 2010). Unfortunately, in present universities, only a few accounting departments have an acceptable range of modern teaching aids and lecture delivery facilities. In addition, the pedagogical approach generally adopted in accounting education delivery is grossly inadequate and unacceptable because it lacks creativity, and does not encourage in-depth analysis and detailed interpretation of problems. In most cases, lecturers rely exclusively on the lecture method of delivery which has clearly become the compelling choice because of the frightening class size in most accounting courses.

In addition, the foundation courses are not taken by accounting students only but by the entire students of business administration/management sciences and other faculties (Uche, 2007). The large class sizes as well as the diverse mix of students in such classes create learning problems/gaps particularly in the accounting foundation courses. A deep understanding of such courses offers the foundation for advanced professional courses in the discipline. Teaching methods which emphasize guided discussion, group work, exposition, case study, guest lectures, and field study should seriously be applied. Unfortunately, only teachers with solid understanding of the course contents and wide experience can effectively apply these effective course delivery techniques; which may pose-serious threat to students' learning.

Furthermore, adequate and effective understanding of accounting requires cognitive knowledge, problem solving ability and analytical aptitude. Cognitive learning builds up knowledge of concepts, rules and procedures required for problem solving in a domain (Anderson in Okarfor 2012). While attitudes are beliefs that influence individual's choice and actions, problem solving is a classroom technique for developing ability for independent thinking, analysis and decision-making; and is generally considered synonymous with inquiry, discovery and insightful learning approaches. All these are required both in business education and related accounting courses.

Strategies for Improving Accounting Education in Edo State

Based on the foregoing issues, problems and limitations, some pragmatic strategies could be recommended to address the problems (Babalola & Tasikun, 2015);

i. As stated earlier, it is the responsibility of universities to build a strong education base on which professional training in accounting can stand. To discharge that task creditably, the universities should endeavor to put in place credible accounting degree curricula. The B.Sc. degree programmes should thus be broad-based to include courses rich in theory and principles to equip students sufficiently for any of the diverse roles they may be called upon to play after graduation in the modern economy. In view of this, there is need to increase course offerings in the area of management, entrepreneurship, mathematics, statistics, ethics, corporate governance, financial management and applied economics. Such courses will prepare students for general management and basic academic research responsibilities. It has become imperative to re-introduce industrial attachment as a precondition for graduation as is the

practice in other professional disciplines like law and medicine. The practice will improve the tie between university accounting graduates and industry. One major shortcoming of both the university accounting curricula and the professional accounting training programmes is lack of attention to the development of skills for handling the accounting problems of small businesses which constitute the bulk of business enterprises in Nigeria (Uche, 2007). Against that background, the accounting curricula should be reviewed to include courses which address the accounting needs of small businesses particularly sole entrepreneurship. A deliberate effort by universities, to develop accounting graduate "experts" in small business accounting would obviously expand the job opportunities of graduate accountants in Edo State and Nigeria as a whole.

ii. In relation to the abysmal level of staff students ratio highlighted earlier, efforts should be made by accounting departments to operate within the 1:30 staff students ratio prescribed by the NUC for undergraduate programme in accounting (Babalola & Tasikun, 2015). The ratio may be smaller for master degree programme. An easy approach to achieve that objective would be to drastically reduce the intake of students. Given the massive pressure for intake into accounting programmes student intake reduction is certainly a sub-optimal solution. The ideal solution thus is to expand school infrastructure as well as the tutorial staff through more attractive remuneration packages and research grants for university accountancy teachers.

iii. Every accounting lecturer should aspire to belong to at least one of the ever growing number of professional accounting bodies (Dominique, R. G. & Dominique, J. U. J. (2014). The advantages of belonging to a professional body are numerous. For instance, the professional bodies organize Mandatory Continuing Professional Education (MCPE) regularly for members. Attendance at such seminars helps lecturers to keep abreast of developments in the accounting profession. Secondly, such seminars provide opportunities for academic paper presentation and publications. Membership of professional accounting bodies has obvious cost implications which could discourage some lecturers from joining. Consequently, the university should fund the membership of their academic staff or, at the very least, work out a cost sharing arrangement with the staff. As part of staff development strategy, accounting lecturers should partner with practicing accounting firms, commercial organizations and colleagues in other universities during long vacation, sabbatical leaves and research leaves. In addition, the university administration should organize in-service training for lecturers who are deficient in teaching methodology (Okafor, 2012).

Theoretical Framework

This research work examined some theories to illustrate the influence of accounting education on empowerment programs,

The Openness Theory by Lewis Goldberg (1964) and developed by O. Okezie (2021)

The openness theory connotes that people adjust their attitudes and behaviors when situations change; a transformation that can be substantial. It supports that education must elicit a positive change in one's life, which consequently affects the society in a positive way. Many persons act irrationally in the society because they are not well informed or educated. For instance, some youths go about destroying public properties when making complaints concerning their neglect by government. Through education however, people become enlightened and rational in their activities. Education assists people to know what they are supposed to know. This eliminates ignorance and enhances value judgments on the part of the citizens.

Furthermore, through education, appropriate skills are acquired by students that will help them in their future. Through these skills, they can become self-reliant or can work in different organizations with ease. Education helps to bring the best in people. They are enlightened, well developed and can fit into the society with ease. Education makes one not to be a novice in his own society or the world as a whole. The implication of this theory to the study is that enlightened citizens (students) in accounting education can become self-employed or work in any business organization thereby reducing unemployment in the society. In this way, youths can assist the government positively concerning their welfare/needs and support where necessary in improving the State. Also, they can make the society enriched because a society with educated persons is an educated and rich society. Furthermore, through appropriate knowledge in accounting education, youths can assist leaders to govern properly. Government on their part should create learning friendly environment in universities so that students will have unhindered access to appropriate education. Both the students, school administrators and government should work in synergy to make all these work.

Empirical Analysis

The following studies were examine to ascertain the influence of accounting education program in Nigerian universities on youth empowerment in Edo State, Nigeria

Asuquo and Ugbe (2019) studied business education programmes curriculum contents and acquisition of employability skills among graduates of universities in Cross River State, Nigeria. To achieve the purpose of the study, two research hypotheses were formulated for the study. Literature was reviewed in line with the variables under study. Findings revealed among others that the level of employability skills acquisition among universities business education graduates is significantly low.

Obiete, Nwazor, & Vin-Mbah (2015) investigated strategies for teaching business education students in Nigerian tertiary institutions for cooperate governance. The study showed that in recent times, graduates from the nation's tertiary institutions of learning most especially the business education graduates have been plagued by the inability to get jobs in corporate industries and companies in Nigeria.

Okoye, Uniamikogbo and Adeusi (2017) did a research on accounting skills for sustainable entrepreneurial development: a study of selected small and medium scale enterprises in Edo State, Nigeria. Accounting skills was found to be contributory to business performance and as such entrepreneurs are advised to embark on capacity building in accounting skill in the area of financial management and record keeping.

Present study differs from above studies in the sense that it brings out different courses that can be studied under accounting education in relation to how individuals can either be self-employed or gainfully employed. Also, the study has ten 10 research objectives and corresponding research questions and hypotheses, treats the acquisition of business skills and is conducted in Edo State. The statement of the problem confronting this research thus, is to determine carefully how accounting education in Nigerian universities can boost youth empowerment in Edo State.

Methodology: Research Design

The research design adopted for this study was the correlational research design. The purpose of a correlational research design is to identity and measure relationships between two or more variables, without the researcher having to control or manipulate any of those variables.

Population of the Study

The population of the study comprised all the Business Education students of the three public universities in Edo State which are Ambrose Ali University, Ekpoma (245); Edo State University, Uzaire (220) and University of Benin, Benin City (412). Thus, the total population of public universities Business education students in the study area was 877 (**Source:** Statistics Department, AAU, 2021; Exams and Records, ESU, 2021, Exams and Records, UNIBEN, 2021).

Sample and Sampling Technique

The sample size for the study consisted of 269 students from three public universities in Edo State which are Ambrose Alli University Ekpoma (89) (51 men and 38 female), Edo State Universities (79) (32 men and 47 female), Uzairue and University of Benin in Benin City (101) (67 men and 34 female). The stratified random sampling technique was used in the sampling of universities and respondents in order to give equal opportunity to every member of the sampled population. The sample size of the study was determined using Krejcie and Morgan (1970) sample size determination table.

Source of Data Collection

The primary source of data was collected was done using the questionnaire which was designed using a five (5) point likert scale.

Method of data analysis

The data was analyzed using frequencies and arithmetic mean. This was best to explain the respondents' opinions. To test the hypotheses**,** the simple regression analysis and ANOVA analysis was used to ascertain the relationship between the two variables.

Data Presentation and Analysis of Findings

Stratification of the respondents

Table1: Stratification of the Respondents of the Study

S/N	Universities	Population		Total
		Men	Female	
1	Ambrose Alli University Ekpoma	51	38	89
2	Edo State Universities	32	47	79
3	Uzairue and University of Benin in Benin City	67	34	101
	Total	**150**	**119**	**269**

Table 1: shows the stratification of the stratification of the respondents of the study based on the institutions and their gender. From the study, most of the respondents were male while the least was female.

Test of Hypotheses

Hypothesis One: There is no significant relationship between accounting education curriculum and job creation, among youths in Edo State

Table 2: Simple Regression Analysis and ANOVA Analysis of the Significant Relationship between Accounting Curriculum and Job Creation, among youths in Edo State

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	59.389	1	59.389	1.849	0.216[b]
	Residual	224.834	394	32.119		
	Total	**284.222**	**395**			
a. Dependent Variable: Job Creation						
b. Predictors: (Constant), Accounting Curriculum						

Table 2: Shows the significance of the extent to which accounting education curriculum relates job creation, among youths in Edo State. The ANOVA result from the regression analysis shows that the f- value of 1.849 has a p-value of .216 which is greater than the critical p-value of .05 indicating that accounting education curriculum does not significantly relates to job creation, among youths in Edo State ($f(1,394) = 1.849$, $p>0.05$). Since the p-value (0.216)> 0.05, the null hypothesis that accounting education curriculum does not significantly relates to relates to job creation, among youths in Edo State was accepted.

Hypothesis Two: There is no significant relationship between accounting education curriculum and wealth creation, among youths in Edo State

Table 3: Simple Regression ANOVA Analysis of the Significant of the Extent to Which Accounting Curriculum relate to wealth creation, among youths in Edo State

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	15.728	1	15.728	.208	0.662[b]
	Residual	530.272	394	75.753		
	Total	546.000	395			
a. Dependent Variable: Accounting Curriculum						
b. Predictors:(Constant), Wealth Creation						

Table 3: Above shows the significance of the extent to which accounting education curriculum relates to wealth creation, among youths in Edo State. An overview of the table revealed that the f- value of .208 has a p-value of 0.662 which is greater than the critical p-value of .05. The null hypothesis is therefore accepted. The implication is that accounting education curriculum does not significantly relate to wealth creation, among youths in Edo State was accepted. The findings of this study shows that there are other factors at play in determining economic growth and development. This means that entrepreneurship or other business related fields are more effective in promoting wealth creation. It also indicates that external factors such as political stability investment climate and infrastructural development bring about wealth creation.

Hypothesis Three: There is no significant relationship between accounting curriculum and self-employment, among youths in Edo State.

Table 4: Simple regression ANOVA analysis of the significance of the extent to which accounting curriculum relates to self-employment, among youths in Edo State

ANOVA[a]						
Model		**Sum of Squares**	***df***	**Mean Square**	***F***	**Sig.**
1	Regression	12.991	1	12.991	.505	0.495[b]
	Residual	231.555	394	25.728		
	Total	244.545	395			
a. **Dependent Variable: Self-employment**						
b. **Predictors: (Constant), Accounting Curriculum**						

Table 4: Shows the significance of the extent to which accounting education curriculum relates to self-employment, among youths in Edo State. An overview of the table revealed that the f- value of .505 has a p-value of .495 which is greater than the critical p-value of .05. The null hypothesis is therefore accepted. The implication is that accounting curriculum does not significantly relates to self-employment, among youths in Edo State.

Discussion of findings

The findings in Hypothesis one indicated that accounting education curriculum does not significantly relates to relates to job creation, among youths in Edo State was accepted. The findings of this study therefore suggest that other factors may be more important for youth employment such as the general state of the economy, availability of resources, or industry-specific opportunities. The finding challenges the assumption that education, particularly in the field of accounting is a panacea for unemployment. This findings therefore points to the need for a more holistic approach to youth employment one that takes into account factors like vocational training, entrepreneurship and public policy. This finding corroborates with the findings of Carneriro and Heckman (2003) asserted that employability is highly related to the rate of skills and training acquired.

The findings in Hypothesis two indicated that accounting education curriculum does not significantly relates to relates to wealth creation, among youths in Edo State was accepted. The findings of this study shows that there are other factors at play in determining economic growth and development. This means that entrepreneurship or other business related fields are more effective in promoting wealth creation. It also indicates that external factors such as political stability investment climate and infrastructural development bring about wealth creation.

The findings in Hypothesis two indicated that accounting education curriculum does not significantly relates to relates to self-employment, among youths in Edo State was accepted. This findings is an indication that for a youth to be self-employed, he or she must have acquired skills that can give them independence. Therefore self-employment is based on the ability of one to

acquire other skills and not just accounting. This finding is in line with the findings of the findings in Hypothesis two indicated that accounting education curriculum does not significantly relate to self-employment and wealth creation among youths in Edo State was accepted.

Conclusion

Despite the relevance of accounting education in the life of youth seeking empowerment, the study concludes however that accounting education may not be an effective means for addressing youth unemployment and wealth creation. This point to the need for a more holistic approach to youth employment that considers a broader range of factors including entrepreneurship, vocational training, and public policy.

Recommendations

The following recommendations were made;

1. There should be promotion of a more diversified education system that includes vocational training, entrepreneurship and other business related field in addition what accounting curriculum tends to offer and promote.
2. The National Universities Commission (NUC) should urgently embark on inclusive curriculum reform that enhances career guidance and counseling to help young people identify the most effective educational and professional paths for their career goals.
3. The accounting curriculum should be restructured to ensure that entrepreneurship is emphasized in core areas in business/accounting education programmes and that
4. Tertiary institution should provide entrepreneurship centres where students can have practical experiences that will quicken the consciousness in students, to direct their attention towards application of skills acquired in practical terms.

References

Akomolafe, C. O. (2016). The effects of teacher disclosure in computer mediated discussion. *Journal of Educational Computing Research, 8*(1), 291-309.

Ameh, R. G. (2012). Defining entrepreneurial activity: Definitions supporting frameworks for data collection. *OECD Statistics Working Paper*, *45*(1), 5-6.

Asuquo, D. & Ugbe, F. U. (2019). Business education programmes curriculum content and acquisition of employability skills among graduates of universities in Cross River State, Nigeria. *European Journal of Education Study, 5*(10), 1-10.

Babalola, S. & Tasiku, J. (2015). The SWISS-Model workspace: A web-based environment for protein structure homology modeling. *Bioinformatics, 22*(1), 195-201.

Carneriro, M., & Heckman, J. (2003). The effect of education on earnings. *Handbook of Labour Economic, 3*, 1855-1902

Dominique, R. G. & Dominique, J. U. J. (2014). Issues and challenges in enhancing efficient entrepreneurial accounting education in Nigerian Universities. *Developing Country Studies, 2*(11), 220 – 232.

Edralin, L. Tibon, O. & Tugas, O. R. (2015). The challenges facing accounting education: The Nigerian experience. *LWATI: A Journal of Contemporary Research, 10*(1), 39 – 54.

Loxley, J. (2010). Youth employment ad transition in a global contex. *International Labour Review, 149(3-4)*, 205-233

Nelson, D. (2011). Human rights democracy and development in Nigeria. *Africa Journal of Economy and Society, 11*(1), 1-16.

Obiete, F., Nwazor, B. K., & Vin-Mbah, O. A. (2015). Strategies for teaching business education students in Nigerian tertiary institutions for cooperate governance. *Contemporary Accounting Education Journal, 11*(1), 90-99.

Okafor, R. G. (2012). Accounting education in Nigerian Universities: Challenges and prospects. *Journal of Economics and Sustainable Development, 3*(14), 205-215.

Okoli, C. I. & Ozoegwu, I. S. (2021). Accounting students' perception on adoption of self-evaluation learning strategies for enhanced academic performance in Colleges of Education in South-East Nigeria. *NAU Journal of Technology & Vocational Education, 6*(1), 149-156.

Okoye, U. & Adeusi O., (2017). *Accounting skills for suitable entrepreneurial development: A study of selected Small and Medium Scale Enterprises in Edo State,* Nigeria. International Conference of African Entrepreneurship and Innovation for Sustainable Development (AEISD)

Osisioma, B. C. (2010). *Global financial crisis: Impact on the Changing face of Accountancy Profession.* Nnamdi Azikiwe University Printing Press.

Sani, A. M. (2016). *Citizenship education for tertiary institutions: Concepts and Principles.* Reprographics Communications Ltd.

The Charity Commission for Northern Ireland (2013). *Human capital maximization: The nexus of up skilling in accounting education.* CCNI Press.

Uche, C. U. (2007). *Principles of Accounting Education: The Nigerian Experience.* Grant Prints.

THE ROLE OF ADULT EDUCATION PROGRAMME IN THE EXPANSION OF LITERACY OPPORTUNITIES TO DISADVANTAGED GROUPS IN AKWA IBOM STATE: EMPIRICAL REVIEW

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ABSTRACT

This study explores the pivotal role of adult education programme in expanding literacy opportunities to disadvantaged groups in Akwa Ibom State. It examined how the programme address the educational needs of the disadvantaged groups i.e. women, rural inhabitants and the minorities. The study utilizes mixed-method approach, quantitative survey and qualitative interview to investigate the effectiveness, accessibility and the impact of adult education programme in Akwa Ibom State. The findings indicate that adult education programme significantly enhances literacy rates, empowers participants with essential life skills and fosters socio-economic development of its participants. However, challenges such as funding, inadequate infrastructure and cultural barriers still persist. Ultimately, the research advocates for improved resource allocation, policy reforms and innovative strategies as measures towards ensuring that adult education serves as a transformative tool for social equity and inclusion.

Key words: Adult education programmes, Disadvantaged groups, Literacyopportunities

Introduction

Literacy comprises a set of cognitive and social practices needed to function effectively in a modern society. Literacy empowers individuals to access, appraise and use information encountered in daily life to proffer solutions to human problems. Adult education programme have been recognized as a critical component in the expansion of literacy opportunities to all who have

not been able to fit into the traditional education system. The traditional school-based system has inflexible structures, unrelatable content and insufficient support mechanisms that fail to meet the diverse needs of adult learners. Therefore, adult education programme is critically structured to address the educational needs of diverse groups of learners ranging from economically disadvantaged individuals, women facing gender-based educational disparities, rural populations with limited access to formal schooling to minority groups who experience social, economic, or cultural marginalization (Nwizu and Olori, 2023).

One of the primary goals of Adult education programme is to bridge the literacy gap existing among diverse disadvantaged groups. Adult education programme enable adults to acquire essential literacy and numeracy skills which are fundamental for personal and professional development through the provision of flexible and accessible learning opportunities. Literacy transcends mere reading and writing, it empowers individuals to critically analyse situations, make informed decisions and improve their standard of livelihood for effective functioning in the society.

Disadvantaged groups are those group of people that face significant barriers in accessing quality education thereby leading to persistent cycles of penury and limited opportunities for self development. These groups include individuals from low socio-economic backgrounds, ethnic minorities, rural population, people with disabilities and other marginalized groups. Limited literacy constrains employability, economic participation, healthcare navigation, civic engagement and general well-being. Without proper intervention, these disadvantages are bound to perpetuate across generations. As clearly pointed out by Idoko (2024), adult education programme have the capacity to address these challenges through the expansion of literacy rate and empowerment of the disadvantaged groups.

UNESCO (2016) offers a comprehensive definition of adult education by describing it as the entirety of organized educational processes, regardless of content, level or methods offered to adult learners for the purpose of self development. Such educational processes can occur in a formal school setting such as Schools, Colleges and Universities or in an informal setting such as apprenticeships. Based on this perspective, adult education involves individuals considered adults by societal standards, who aim to develop their abilities, enrich their knowledge and enhance their professional qualifications. The goal is to foster changes in attitudes and behaviors, thereby

promoting personal growth and enabling active participation in social, economic and cultural affairs.

Adult education is also regarded as the provision of largely, non-vocational education for people who dropped out of school and are not formally registered for a College or University education that can lead to certification. Day-time or evening tuition can be provided by an Extra-Mural or Extension Department, College, Uuniversity or by other institutions such as Trade unions or the Workers Educational Association. Such training can cover wide range of cultural, recreational, community and sporting activities.

Adult education programmes are often designed to be responsive to the specific needs of the learners they serve. For example, programmes targeting economically disadvantaged individuals might focus on vocational training and skill development that can enhance employability. For women, particularly in patriarchal societies, adult education programme can offer empowerment through knowledge acquisition thereby leading to greater participation in economic activities and community decision-making processes. In rural areas, adult education programmes may incorporate agricultural education and health literacy thus addressing the immediate needs of the community and promoting sustainable development. The overall goal of the study is to articulate how literacy outreach has helped disadvantaged groups in Akwa Ibom State to overcome barriers to empowerment and social inclusion.

Statement of the Problem

Despite significant progress in education, a substantial number of adults in Nigeria, particularly those from disadvantaged groups are not literate. This lack of literacy skills undoutbely limits their ability to access better employment opportunities, participate fully in civic activities and improve their quality of life. Although various adult education programmes have been implemented to address this issue, their effectiveness in reaching and impacting the marginalized groups remains questionable. There is a critical need to evaluate the role of adult education programmes in expanding literacy opportunities to the disadvantaged groups in Nigeria. This study therefore seeks to identify the specific problems challenging the succesful expansion of literacy rates among disadvantaged adult learners using adult learners in Akwa Ibom State

Research Questions

1. What are the specific adult education programmes currently available to disadvantaged groups in Adult education centres in Akwa Ibom State?
2. How effective are the Adult education programmes in improving the literacy rates among disadvantaged groups in Adult education centres in Akwa Ibom State?
3. What are the factors challenging adult education programmes in the engagement of disadvantaged groups in Adult education centres in Akwa Ibom State?
4. What are the strategies that can be implemented to enhance effectiveness in the expansion of adult education programmes to disadvantaged groups in Adult education centres in Akwa Ibom State?

Methodology

This study employed Descriptive survey research design to explore the current status of adult education programmes and their impact on literacy among disadvantaged groups in Adult education centres in Akwa Ibom State. The population of the study includes all the adult learners and facilitators of adult education programmes in adult education centres and key stakeholders across adult education centres in Akwa Ibom State, The study utilized multi-stage sampling technique. Stratified sampling technique was used to divide the population of the study into three groups based on the three senatorial districts of the State. Simple random sampling technique was used to select two adult learning centers from each District i.e. one urban and one rural adult education center thus resulting in six adult learning centers in all. In each selected adult learning centers, Equal Quota sampling technique was used to select 35 respondents from each centte, thus, resulting in a total of 210 respondents as sample size for the study. Additionally, 12 key stakeholders were also interviewed. The primary instrument for data collection was a structured Questionnaire for learners and facilitators and a semi-structured interview guide for stakeholders.

Quantitative data from the instruments were analyzed using Descriptive statistics of mean and standard deviations. Qualitative data from the interviews were analyzed thematically, involving coding and identifying key themes and patterns. The mixed-method approach provided a comprehensive analysis of the effectiveness, challenges, and improvement strategies of adult education programmes in enhancing literacy opportunities for disadvantaged groups in Akwa Ibom State.

Results

Research Question 1: What are the specific adult education programmes currently available to disadvantaged groups in Adult education centres in Akwa Ibom State?

The study identified several specific adult education programmes available to disadvantaged groups in Adult education centres in Akwa Ibom State. The summary is presented in table 1.

Table 1: Adult education programmes currently available to disadvantaged groups in Akwa Ibom State

Adult Education programme	Mean	Standard Deviation
Basic Literacy Programmes	3.63	1.03
Post-Literacy Programmes	2.96	0.89
Vocational Training Programmes	3.41	0.97
Health Education Programmes	3.59	1.12

Basic Literacy Programmes have the highest mean score of 3.63, thus, indicating that they are the most widely participated Programmes among the disadvantaged groups. Health Education Programmes follow closely with a mean score of 3.59, highlighting their substantial presence and importance. Vocational Training Programmes also have a high mean score of 3.41, suggesting they are a significant part of the adult education Programmes. However, Post-Literacy Programmes have the lowest mean score of 2.96, indicating that they are less participated programmes in comparison to the other programmes.

As reflected by their high mean scores, Basic Literacy Programmes and Health Education Programmes are the most prominent adult education programmes available to disadvantaged groups in adullt education centre in Akwa Ibom State. Vocational Training Programmes also play a significant role while Post-Literacy Programmes, although available, is the less participated programme by adult learners in adult literacy centres in Akwa Ibom State.

Research Question 2: How effective are the Adult education programmes in improving the literacy rates among disadvantaged groups in Adult education centres in Akwa Ibom State? The summary of findings is presented on table 2 as follows:

Table 2: Effects of Adult education programmes in improving literacy rates among disadvantaged groups in Adult education centres in Akwa Ibom State

Adult Education programmes	Mean	Standard Deviation
Enhanced Employability	2.84	0.89
Improved Literacy Skills	3.72	0.99
Health Awareness	3.57	0.97

The data indicates that the most significant impact of Adult education programmes in Adult education centres in Akwa Ibom State is on improved literacy skills followed by health awareness. These two areas have relatively high mean scores of 3,72 and 3.57 respectively. This suggests that the programmes are mostly effective in these domains. On the other hand, the impact of Adult education programmes on employability is less pronounced 2.84 when compared with other two areas. The study found out that Adult education programmes in Adult education centres in Akwa Ibom State have positive impact on literacy rates among disadvantaged groups in the State.

This information highlights the strength of the current adult education programmes in fostering essential literacy skills and health knowledge among disadvantaged groups in Adult education centres in Akwa Ibom State. It also points to a potential area for improvement which is enhanciment of employability skills thus enabling adult learners to leverage on their education for economic opportunities.

Research Question 3: What are the factors challenging adult education programmes in the engagement of disadvantaged groups in Adult education centres in Akwa Ibom State?

The study identified key factors challenging adult education programmes in the engagement of disadvantaged groups in Adult education centres in Akwa Ibom State. Table 3 presents the summary of findings as follows:

Table 3: Factors challenging adult education programmes in the engagement of disadvantaged groups in Adult education centres in Akwa Ibom State

Adult Education programmes	Mean	Standard Deviation
Limited funding	3.67	1.22
Inadequate infrastructure	3.52	1.18
Low awareness	2.41	0.87
Cultural barriers	2.37	1.02
Transportation issue	3.27	0.88

Table 3 reveals the most significant challenges facing Adult education programmes in adult education centres in Akwa Ibom State as limited funding and inadequate infrastructure. Both domains have high mean scores of 3.67 and 3.52 respectively. Transportation issue is also a notable challenge though less critical. On the other hand, low awareness and cultural barriers are perceived as less significant obstacles, though they still pose challenges to the effective implementation and engagement of adult education programmes.

These findings suggest that addressing the issues of funding and infrastructure should be a priority for improvement in the engagement of disadvantage groups in adult education programmes in Adult education centres in Akwa Ibom State. Furthermore, enhancement of transportation facilities can alleviate some of the factors constraining effective engagement of disadvantaged groups in these programmes. While low awareness and cultural barriers are less critical, they should not be overlooked, as they still affect the overall effectiveness of the programmes.

Research Question 4: What are the strategies that can be implemented to enhance effectiveness in the expansion of adult education programmes to disadvantaged groups in Adult education centres in Akwa Ibom State?

Respondents were presented with some suggested solutions and their responses are presented in table 4.

Table 4: Strategies for the enhancement of effectiveness in the expansion of adult education programmes for disadvantaged in Adult education centres **Akwa Ibom State**

Adult Education programme	**Mean**	**Standard Deviation**
Increased Funding	3.72	1.09
Community Outreach	3.13	1.21
Infrastructure Development	3.56	1.33
Flexible Scheduling of classess	3.42	1.20
Cultural Sensitivity Training	2.55	0.98
Transportation Solutions	3.20	1.04

The data in table 4 highlights that increased funding is the most crucial strategy for enhancing effectiveness in the expansion of adult education programmes to the disadvantaged groups in the study area. Infrastructure development and flexible scheduling of classes are also seen as significant strategies, though there is some variability in how strongly respondents feel about their importance. Community outreach and transportation solutions are considered moderately important, while cultural sensitivity training is seen as less critical, though still relevant.

These findings suggest that prioritizing funding and infrastructure improvement can significantly enhance effectiveness in the expansion of adult education programmes to the disadvantaged groups in the study area. Also, the implementation of flexible scheduling of classes and community outreach efforts can further improve effectiveness in the expansion of adult education programmes. While cultural sensitivity training and transportation solutions are less critical, they should still be considered as part of a comprehensive strategy to address the needs of the disadvantaged groups.

Discussion

The first finding revealed that Basic Literacy Programmes are the most prevalent among disadvantaged groups in Akwa Ibom State; Health Education Programmes also have a significant presence, closely followed by Vocational Training Programmes. Post-Literacy Programmes have the lowest mean score, indicating they are less prevalent or less participated in comparison to other

programmes. The findings is in tandem with UNESCO (2016), which highlighted the prominence of basic literacy programmes in many developing countries, thus emphasizing on it foundational role in adult education. However, a study by Agbulu (2016) contradicts the findings of the study by asserting that vocational training programmes were more prevalent in some regions of Nigeria due to the immediate employability benefits they offer to participants which is important for sustainable development.

Similarly, the finding showed that adult education programmes are most effective in improving literacy skills, health awareness and enhanced employability though to varying extent.

The findings also indicated that limited funding is the most significant challenge, followed by inadequate infrastructure. Transportation issues also present a notable challenge, whereas low awareness and cultural barriers are less significant. Similar challenges were identified by Abanyam, Edeh, Victor (2016), who emphasized on the critical role of funding and infrastructure in the success of adult education programmes. In contrast, cultural barriers were highlighted as a more significant issue in a study by Kaestle, Campbell, Finn, Johnson and Mickulecky (2001), particularly in rural areas where traditional belief may hinder participation in adult education.

Finally, the findings highlighted that increased funding and infrastructure development are perceived as the most crucial strategies. Flexible scheduling of classes and transportation solutions are also important, while community outreach and cultural sensitivity training are seen as moderately important. The emphasis on funding and infrastructure aligns with the recommendations of Aguguam, Okwarachukwu, Ikedi (2021), who argued that sustainable adult education requires substantial financial and infrastructural investment. Obinna-Akakuru, Ibe, Akakuru and Nelson-Okafor (2021) supported the need for flexible scheduling by asserting that teaching methodologies that enhances the interest of the adult learners as well as their diverse schedules should be adopted by facililatators. However, the lower importance placed on cultural sensitivity training differs from findings by Torres (2003), who underscored the necessity of culturally responsive teaching methods in adult education.

Conclusion

The study investigated the role of adult education programmes in expanding literacy opportunities for disadvantaged groups in Akwa Ibom State, Nigeria. It reviewed evidence on how these tailored community programmes improve functional literacy levels and produce broader social impacts;

challenges to implementation were also discussed. The findings reveal that Basic Literacy Programmes and Health Education Programmes are the most prominent, this indicated their critical role in providing foundational skills and essential health knowledge to the target populations. Vocational Training Programmes also play a significant role, although Post-Literacy Programmes are less prevalent. The effectiveness of these programmes is evident in their ability to improve literacy skills and health awareness, although their impact on employability is less pronounced. The primary challenges identified include limited funding, inadequate infrastructure and transportation issues, which significantly hinder engagement and expansion of these programmes.

Strategies to enhance the effectiveness and accessibility of adult education programmes include increased funding, infrastructure development, flexible scheduling and transportation solutions. While community outreach and cultural sensitivity training are also important, they are perceived as moderately impactful compared to other strategies.

Recommendations

Based on the findings of the study the following recommendations are suggested:

1. Government and non-governmental organizations should allocate more resources to adult education programme to ensure the sustainability and effectiveness of the programme.
2. Investment in physical facilities such as classrooms, libraries and learning materials is essential. Modern, well-equipped centers will attract more learners and provide a conducive learning environment.
3. Continuous assessment of adult education programmes is necessary to measure their impact and identify areas for improvement.
4. Regular monitoring and evaluation exercise can enhance effective programmes delivery for optimal outcome.
5. Collaboration between government, private sector and civil society is crucial. Multi-stakeholder partnerships can bring in diverse resources; promote expertise and perspectives thereby enhancing the overall effectiveness of adult education programmes in the state.

References

Abanyaam, F., E., Nathaniel, I., E., & Victor, A., A. (2016). Repositioning technical vocational education and training (TVET) and entrepreneurship education for self –reliant in Nigeria. *Journal of Association of Vocational and Technical Educators of Nigeria* (JAVTEN), 21 (1) 275-283

Agbulu, N. O., (2016). Technical and Vocational Education and training (TVET) and job creation forn national development. *Journal of Association of Vocational and Technical Educators of Nigeria* (JAVTEN), 21 (1) 1-7

Aguguam, C., N., Okwarachukwu, A., C., & Ikedi, U. (2021). Adult learners and Educational Resources. In R. Igbo, K. Kazeem, P. A. Nwamuo, A.O. Solomon (Eds). *Fundamental Isuues in Adult Education.* A Book of Readings in honour of Professor Stella Chioma Nwizu. 543-551, Citihall International.

Obinna-Akakuru, A., U., Ibe, P., C., Akakuru, C., O., & Nelson-Okarfor, E., A., (2021). Methologies of Adult learning. In R. Igbo, K. Kazeem, P. A. Nwamuo, A.O. Solomon (Eds). *Fundamental Isuues in Adult Education.* A Book of Readings in honour of Professor Stella Chioma Nwizu A Book of Readings in honour of Professor Stella Chioma Nwizu. 60-67, Citihall International.

Ademu, A. (2021). Assessment of the implementation of Adult Education programme in Benue State, Nigeria. *Journal of Adult Education Research*, 12(4), 150-167.

Ayantunji, M. M. (2023). Adult Education In Nigeria: Issues, Perspectives And Challenges. *International Council for Education Research and Training*, 1(2), 172-187

Billington, D.D. (2000). Seven charateristics of highly effective adult learning programmes.*The Adult Learning in Higher Education and Work Place,* 2(1), 1-4.

Idoko, N. (2024). Future prospect for adut education in Nigeria, hppts://disciplines.ng/future-prospect-for-adult-education.

Ifeobu, G. (2018). Evaluation of the Implementation of National Curriculum for Secondary School Biology in Anambra State. *Journal of Educational Research and Evaluation*, 22(1), 45-60.

Kaestle, C. F., Campbell, A., Finn, J. D., Johnson, S. T., & Mickulecky, L. J. (2001). *Adult literacy and education in America: Four studies based on the National Adult Literacy Survey*. Washington, DC: National Center for Education Statistics.

Kasworm, C.E., Rose, A. D. and Ross-Gordon, J.M. (Eds.) (2010). *Handbook of Adult and Continuing Education*. Los Angeles: London.

Nwizu, S. C. & Olori, C. N. (2023). Bridging the gap for inclusiveness through adult education, https://journal.ezenwaohaetoic.org.

Oktapiani, N., Akbar, M., & Karnati, P. (2019).Evaluation of Basic Literacy Educational Program in Bogor Regency.*Journal of Educational Evaluation and Research*, 8(3), 100-115.

Rikichi, B. (2011). Assessment of the Implementation of Social Studies Curriculum for Effective Citizenship in Primary Schools in Kaduna State.*Journal of Curriculum Studies*, 19(2), 89-103.

Torres, R. M. (2003). Lifelong learning: A new momentum and a new opportunity for adult basic learning and education (ABLE) in the South. *Adult Education and Development*, 60, 3-18.

UNESCO. (2016). *Global Education Monitoring Report 2016: Education for people and planet: Creating sustainable futures for all*. Paris: UNESCO.

Zubairu, A. (2011). Evaluation of Biology Curriculum Implementation in Public Secondary Schools in Kaduna Metropolis.*Journal of Science Education*, 15(1), 72-85.

PROSPECTS AND CHALLENGES OF EFFECTIVE TEACHERS IN THE EDUCATION OF THE GIRL-CHILD

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Abstract
The study investigates the challenges encountered by teachers and the society in the area of girl-child education. It discusses key features and methods deployed by skilled educators to support the education of girls and the important roles they play in the advancement of societal gender equality and empowerment of women. It underscores the necessity of engaging culturally right teaching methods such as involvement with local communities, and addressing economic and social hurdles to improve the educational experiences of female students. Furthermore, the study examined the critical nature of compassion and perceptiveness in educational roles and how these attributes foster a nurturing and fair learning climate. Relying on secondary sources of data as existing literature, novels and reputable journal publications from recognized data bases, the study recommended various tactics to aid in the development of such characteristics in teachers through continuous professional development, introspective exercises, and active community participation among others. The study concludes by emphasizing the place of the girl-child in nation building, and the importance of effective teachers to girl-child education and development.

Keywords: Effective Teacher, Girl-Child, Girl-Child Education, Women Empowerment

Introduction

Studies in feminism as a concept, and as a theory has afforded researchers the scholarship to perceive girl-child education, and educational challenges in Africa as emanating mostly from patriarchal conspiracies hinged on traditions and customs since the colonial period. The exclusion of girl children from western education during the colonial era necessitated the writing of their stories by men. While writers like Ousmane Sembene wrote about the capacity of the empowered woman, others like Achebe saw women more from their patriarchal narrative of subjugation.

Mutunda (2009) traced women's underdevelopment and absence from post-colonial politics to the educational deprivation of the girl-child during the colonial era. Ogwude (2013) narrowed this down to Achebe's portrayal of the African woman in his novel *Things Fall Apart* of 1958. Condé (1979) in Mutunda (2009) affirmed also that the reservation of the European schools for boys only went on to create a great gulf between literate men and illiterate women, thereby dividing the sexes.

Yekini (2022) synthesized all of these thus:

> Not only were the boys educationally privileged over the girls by the colonial masters, traditions and customs equally prevented the girls from going to school, even when the opportunity eventually presented itself. Again, girls were saddled with domestic duties, while boys were left to pursue western education. Social role assignation also contributes to the lack of education of the girl child.

Gender roles assignation is one of the limiting practices of patriarchy that condemns the girl-child to the kitchen. While society was encumbering the girl-child with domestic chores, the boy-child was busy ascending the stairs of enlightenment and empowerment, thereby becoming the master of his destiny. The girl-child since the colonial era had been in need of tutelage and tutors beyond pots and pans. Egya (2013) in his essay "The New Woman in Nigeria Fiction…" investigated and exposed various feminist agencies employed in checking and countering patriarchal traditions responsible for the lack of growth and progress of the female child in the society.

For there to be a new woman, there must first be a new girl-child. The new girl-child is the one with hopes and dreams as the boy-child, and the one with adequate support and empowerment from the society to achieve them. This informs her need of appropriate and adequate quality education, and the befitting teachers to give it. This new girl-child is the new woman that Adebayo (2015) entreated to surmount patriarchal restrictions and limitations, and break the patriarchal strongholds that have held her captive. The new girl-child desires and seeks equal access to education, and frees herself from excessive domestic responsibility, and impeding societal expectations.

Going from the statement of the problem to the solution; the thrust of this paper is predicated on the need for quality girl-child teachers, and their necessary characteristics. A historicity of teacher-student relationship since the post-colonial period will reveal not only a plethora of chronicles of teaching and learning challenges, but also unsavoury tales of woes and indecency from both parties.

Nevertheless, this paper focuses on the essentials of a good girl-child teacher. The paper leverages on existing literature to foreground the characteristics of such teachers, and present doable suggestions in the quest for ideal girl-child teachers.

Definition of concepts

Effective Teacher: The absence of a general consensus on what constitutes an effective teacher leads to diverse definitions. Lupascua et al. (2014) posits that "effective teachers have clarity about their educational goals, are conversant with educational and training content, have good communication skills, and continually monitor their students' understanding. They seek to improve and support their teaching methods."

Muguti and Maware (2013) present Million (2004) as defining an effective teacher as someone who prefers to focus on effective instruction or best teaching practices, and possessing behaviours and practices which enhance the learning of all students.

In all, the professional standards, competencies, qualifications and trainings matter also when defining effective teachers. In the case of an effective teacher for a girl-child education; a gender-responsive teacher is needed to encourage the female students and give them equal opportunity and motivation in the classroom.

Girl-Child: She is not just a child between the age at birth and the universal adult Suffrage age of 18, as delineated in Lyndsey (2022) and Offorma (2009). She is rather a constantly evolving being needing vital childhood care and education. Interestingly, Jones and Misolo (2024) define the girl child as "...the author of Her own story. The captain of Her own ship." This is in line with the thinking of Egya (2013) on the new woman. Moreso, Jones and Misolo (2024) went on to describe her as "your daughter. She is your sister. She is your mother, your aunt, your grandmother, your friend, your colleague. She is you. She is the woman in the girl, the girl in the woman. She is free of and undefined by centuries upon centuries of diminishing ideology, theology, and traditions that treat being born female as lesser than, unclean, inferior, meant for submission, the cause of evil in the world. As not meant to grow into the full human agency and power of adulthood."

The image of the new girl-child that is rising above patriarchal stereotypes and imposed gender restrictions, is worth projecting. She is worth educating by the best of teachers to guaranty a fulfilled and prosperous future. The outcome of the proper education of the girl-child will include among other positive results; a happy home and a harmonious society.

Girl-Child Education

Omede and Agahiu (2016) see "Girl-child education is a catch-all term for a complex set of issues and debates surrounding (primary education, secondary, and tertiary and health education in particular) for girl and women."

Omede and Agahiu (2016) observing Micheal (2011), described girl-child education by extension as "the most important aspect of human development, a key to a successful living, especially girl-child education." In tandem with the United Nations' Sustainable Development Goal number 5 on gender equality, Omede and Agahiu (2016) agree that Girl-Child education comprises aspects of gender equality.

Girl-child education also entails new approaches in teaching methodology. Pedagogy of Girl-children needs to be gender-responsive and cognizant of their realities. Educating girls needs to be more inclusive of the peculiarities of the female, as varied to the male, but not lesser in quality.

Characteristics of the Effective Girl-Child Teacher we need

Quality education for girl-children is crucial for advancing gender equality and women's empowerment in the society. Key to these are competent educators. The following traits are essential in teachers who want to be successful in educating girls:

A Gender Sensitive and aware Teacher

Educators proficient in teaching girls are aware of gender disparities and understand the societal, cultural, and economic hurdles that hinder girls' access to education. Such awareness eases the development of a nurturing and fair educational atmosphere tailored to the needs of female students (Aftab et al., 2023).

A Promoter of Gender Equality

These educators actively foster gender parity within the classroom setting. They challenge existing stereotypes, motivate girls to engage in various activities, and ensure boys and girls have equal opportunities. Furthermore, they champion the cause of girls' education in the community, highlighting the significance of educational access for girls to parents and influential community members (Li et al., 2022).

One Who Establishes a Safe Learning Environment

Considering the safety concerns that girls often face in educational settings, a competent educator makes certain that his/her classroom is a secure environment free from harassment and discrimination. He/she implements stringent policies to handle any incidents of mistreatment and cultivate a culture of respect and inclusivity (Bhatla et al., 2014).

A Protector, Not a Predator

The girl-child teacher should be a safe haven, and not someone who sees her as a potential prey, or a sex-slave. The morality of such a teacher must never be in question. Teachers in some cases

have been implicated in the abduction, child trafficking, and eventual death of girl children. One of the targets of the United Nations' SDG number 5, according to UN Women (2024) is to "Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation." (UN Women, 2024).

An Experienced Confidant, Not A Despised Telltale

A teacher that a girl-child can confide in, when she is challenged or in doubt. When a child faces issues such as body shaming, dropping out of school, child-marriage, child pregnancy, and molestation, a trusted and loyal confidant to the child is needed. In the UNESCO IICBA periodical issue titled "Nigeria: Basic Profile of Early Childbearing", Malé and Wodon (2023) posit that:

> In Nigeria, many girls give birth as children (before the age of 18), at a time when they may not yet be physically and emotionally ready to do so. Most child mothers are child brides. By giving birth so early, they are at greater risk of experiencing poor health outcomes, dropping out of school, earning less in adulthood, and living in poverty.

A Nurturer, Not A Destroyer

In certain climes, girl-children's dreams are killed daily, in favour of those of boys their age. There are instances were girl-children`s most deadly foes were their stereotypical teachers who told them that they cannot do better than the boys, especially in school subjects needing logic like mathematics and physics, among others. Such teachers underestimate and limit girl-children's capacities. These teachers relate with girl-children according to their biases and patriarchal agenda. Relying on their traditional programming on gender, they tell girls that they cannot be as good as the boys, talk less being better. Teachers with such limiting mentalities, who instead of nurturing the abilities of girl-children, destroy their dreams, are not needed.

Girls are raised as inferior to boys, both at home and in school. Adichie (2014) captures the patriarchal nurturing of the girl-child succinctly in this disturbing quote:

> ...we do a much greater disservice to girls, because we raise them to cater to the fragile egos of males. We teach girls to shrink themselves, to make themselves smaller. We say to girls: You can have ambition, but not too much. You should aim to be successful but not too successful, otherwise you will threaten the man. If you are the breadwinner in your relationship with a man, pretend that you are not, especially in public, otherwise you will emasculate him.

Society needs teachers that are effective in teaching girls that what boys can do, they can do too. Such teachers should aim at nurturing girl-children that are acceptable to the society as equal to male children. Only through these types of nurturing can we create a new world that is void of

gender restrictions and patriarchal limitations. Only through these can there be happier and freer beings, regardless of their sex.

An Enabler, Not A Crippler

The author Maya Angelou in O'Dea (2024) admonishes all, including girl-children to "Do the best you can until you know better. Then, when you know better, do better." Society needs girl-child teachers that will teach girl-children to do their best until they know better, so they can do better, even than the boys. Moreover, an effective girl-child teacher should be a bridge builder, not a wall raiser. Someone who removes emotional and intellectual obstacles on their way to self-discovery. A person who assists girl-children in discovering their abilities, talents and gifts. In the contemporary world, children need connecting links to their destinies. However, many teachers, in putting and holding girls down, have truncated and altered their fortunes and future. Such a teacher should be a believer, and not a doubter in the abilities of girl-children. Such a teacher should fill the girl children with the possibilities in their capacities, and teaches them to find help safely when help is needed.

Effective teachers provide support and motivation, recognizing and applauding the accomplishments of their female students. This positive reinforcement and encouragement are crucial, especially in disciplines where girls are typically underrepresented, like STEM, to boost their confidence and self-esteem (Granstam, 1986).

A Professional, Not A Mediocre

Society needs intelligent, knowledgeable and well-trained teachers, who would in turn raise intelligent and knowledgeable girl-children. Society does not need teachers who avoid and scoff at pertinent questions from girl-children, while undermining them because they are girls.

Constant training is essential for educators to remain updated on best practices in girl-child education. Workshops and professional development programmes focusing on gender equality, inclusive teaching techniques, and the latest educational innovations are important (Menon et al., 2017).

A Kind Empathiser, Not A Blind Sympathizer

Society needs teachers that will go out of their comfort zone to help a pupil or student in need. Someone who sees himself/herself in the shoes of the child. Empathy is vital for educators who help girls facing unique challenges. These educators take time to understand the distinct situations affecting their students, enabling them to offer personalized support and foster a nurturing learning environment (Abebe et al., 2019).

A Leader, Not A Misleader

Girl-children have often been misled because they trusted in the wrong persons for guidance. An effective girl-child teacher ought to be a refuge from the deceits of society. Such a teacher should be interested only in the safe passage of girl children into their adolescence. He should be a good role model that exemplifies all the good qualities and none of the bad. Teachers have been known

to initiate girl children into vices and bad habits such as drug addiction, and prostitution at an early age. A girl-child teacher should be a beacon of morality and a bastion of hope.
Positive role modeling by teachers, especially female teachers, is influential, highlighting the achievements possible through education and career success. Male educators also contribute significantly by showing respect and equality in dealings with female colleagues and students (Mike & Muhammad, 2020).

A Collaborator, Not A Loner

Successful educators develop strong connections with parents and community members to enhance girls' educational experiences. They often communicate with parents about their daughters' progress and work collaboratively to overcome obstacles to education. Community engagement is key to changing beliefs and garnering support for educating girls (Oswald, 2023).

A shift in paradigm is observed in the way men are relating to girl-children and boy-children nowadays. Fathers are changing their orientation gradually, and are beginning to perceive female children as equally beneficial as boys, whom they erstwhile thought were more important than girls.

This new development is worthy of research in the sense that men as products of patriarchal societies are wont to think that male children are more important than female children. However, experientially, men are observing otherwise; that since the burden of patriarchy has encumbered the male children and prevented them from performing their responsibilities to their parents, the female children end up taking care of their parents-therefore eliciting more endearment. This trend is becoming the new reality that is increasingly affecting the way female children are currently being viewed (Anushka, 2022; Brown-Worsham, 2013). It is in fact surreptitiously modifying the perception of patriarchy of the female children, vis-à-vis the male. Over time, male teachers will be nurtured from birth as gender-responsive.

Suggestions

By adopting these suggestions, educational bodies and policymakers can foster an environment that enhances girl-child education, ultimately contributing to a fairer and more prosperous society:

2. Improve Teacher Training Programmes: Include comprehensive sections on gender awareness , inclusive educational tactics, and cultural familiarity in training programmes for educators.
3. Advance Continuous Professional Development: Offer ongoing workshops and training for current teachers to refine their abilities in gender-sensitive teaching and modern educational technologies.

3. Encourage Community Involvement: Design initiatives that engage families, local leaders, and community groups in supporting the education of girls, overcoming cultural obstacles, and enhancing the perceived value of educational achievements for girls.

4. Expand Technology Use: Allocate resources to and use educational technologies that broaden the reach and improve the quality of education for girls, especially those in isolated or underprivileged areas.

5. Launch Mentorship Initiatives: Set up organized mentorship programmes that pair girls with accomplished women across various professions, offering guidance and role models.

6. End Socio-Economic Barriers: Develop strategies and policies that offer financial aid, scholarships, and resources to poor girls to keep their access to education.

7. Establish Safe Educational Spaces: Create comprehensive policies to combat discrimination, harassment, and bullying in schools to ensure a supportive and safe environment for girls.

8. Promote STEM Education for Girls: Support the participation of girls in Science, Technology, Engineering, and Mathematics through specialized programmes and campaigns.

9. Develop Gender-Fair Curricula: Continuously review and adjust educational content to end gender biases and incorporate positive depictions of women and girls.

10. Cultivate Critical Thinking and Leadership: Introduce teaching methods that motivate girls to engage in critical thinking, voice their views, and cultivate leadership abilities.

11. Conduct Periodic Evaluations: Set up a system for regular review of the effectiveness of initiatives targeting girl education and apply adjustments based on empirical data.

12. Engage in Global Collaboration: Take part in international partnerships and exchanges to embrace global best practices in educating girls.

Conclusion

Educating girls is pivotal for achieving gender equity and advancing society overall development. This study has underscored how crucial passionate and effective educators are to girl-child education. Beyond just understanding their subject matter, these educators must show gender awareness and responsiveness, empathy, and a dedication to fostering environments that welcome all students. Such educators play a key role in change by dismantling stereotypes, promoting analytical thought, and enabling girls to realize their potential.

Adopting teaching methods that resonate with local culture, along with involving the community and mitigating socioeconomic hurdles, has proven to substantially improve educational results for girls. Additionally, it is vital that continuous upskilling for educators is prioritized to enhance their empathy, understand gender nuances, and deepen their ability in their subjects.

The study has also highlighted the essential roles of technology in education, the establishment of secure educational environments, and effective mentorship in the educational paths of girls. By embracing these holistic strategies, educators can provide meaningful support to girl education, thereby aiding in achieving wider gender equity and societal strengthening.

References

Abebe, B. T., Weiss, M., Modess, C., Roustom, T., Tadken, T., Wegner, D., Schwantes, U., Neumeister, C., Schulz, H. et al. (2019). Mindfulness virtual community. *Trials*, *17*(1).

Adebayo, A. (1996). Tearing the veil of invisibility: The Roles of West African Female Writers in Contemporary Times. In *Feminism and black women's creative writing: theory, practice, criticism*. Adebayo, A. (ed.). Ibadan: AMD Publishers. 39-42.

Adichie, N. C. (2014). *We should all be feminists*. New York: Vintage Books.

Aftab, M. J., Ali, S., & Rehman, N. U. (2023). Teachers' Perceived Gender Equality in Educational Opportunities at Secondary School Level. *VFAST Transactions on Education and Social Sciences*, *11*(1). https://doi.org/10.21015/vtess.v11i1.1455.

Anushka (2022). 5 Reasons Daughters are their Dad's Favourite. Ferns. N Petals. https://www.fnp.ae/blog/5-reasons-daughters- are-their-dads- favourite.

Bhatla, N., Achyut, P., Khan, N., & Walia, S. (2014). Are schools safe and gender equal space. In *Plan International and International Center for Research on Woman (ICRW)*.

Brown-Worsham, S. (2013). Men need daughters more than they need sons. Cafemom.https://cafemom.com/parenting/158770/.

Egya, S. E. (2013). The New Woman in Nigeria Fiction: Zaynab Alkali, Akachi Adimora-Ezeigbo and Sefi Atta. In *writing the female image in African fiction*. Ibadan: Ibadan University press. 211-219.

Granstam, I. (1986). Technology for Girls in Sweden. *European Journal of Engineering Education*, *11*(3). https://doi.org/10.1080/03043798608939307

Jones, E. N., & Misolo, D. (2024). Who Is the Girl Child? The Girl Child & Her Long Walk to Freedom Blog. https://girlchildlongwalk.org/who-is-the-girl- child/

Li, Y., Zuo, M., Peng, Y., Zhang, J., Chen, Y., Tao, Y., Ye, B., & Zhang,

J. (2022). Gender Differences Influence Gender Equality awareness , Self-Esteem, and Subjective Well-Being Among School-Age Children in China. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.671785

Lyndsey, G. (2022). Ages and Stages. Very well family, Medical Blog. 4157393#:~:text=What%20are%20the%20stages%20of,than%20others%2C %20and%20that's%20OK.

Malé, C., & Wodon, Q. (2023). Nigeria: Basic Profile of Early Childbearing. UNESCO.IICBA.
https://www.iicba.unesco.org/sites/default/files/medias/fichiers/2023/05/Brief%202023-5.pdf

Menon, R., Nedungdi, P., & Raman, R. (2017). Technology enabled teacher training for low literate, remote and rural multi-grade education centers. *2017 International Conference on Advances in Computing, Communications and Informatics, ICACCI 2017*, *2017-January*. https://doi.org/10.1109/ICACCI.2017.8126069

Mike, J. H., & Muhammad, A. (2020). Impact of female teachers on girl child education in the primary school level in Yola North and South Local Government Areas of Adamawa State. *Journal of Education Research and Behavioral Sciences*, *9*(3).

Muguti, J., & Maware, V.H. (2013). Defining an Effective Teacher: An Examination of Characteristics. International J. Soc. Sci. & Education, 4(1).

Mutunda, S. (2009). Through a female lens: aspects of masculinity in francophone women's writing. PhD. Thesis. The University of Arizona. Retrieved from ProQuest Dissertation and Thesis. 26 September, 2015. 8-11, 17, 30-39, 45-60, 175-178.

O'Dea, S. (2024, Feb. 15). When you know better, you do better. Stephanie O'Dea Blog.https://stephanieodea.com/2024/02/when-you-know-better-you-do- better/

Offorma, G. C. (2009). Girl-child Education in Africa. Keynote Address presented at the Conference of University WOMWNE of Africa, from 16th-19th of July. Lagos, Nigeria.

Ogwude, S. (2013). Achebe and the Woman Question. In *writing the female image in African Fiction*. Ogwude, S.O. (Ed). Ibadan: Ibadan University press.

Omede, A. A., & Agahiu. G. E. (2016). The Implications of Girl-Child Education to Nation Building in the 21st Century in Nigeria. Global Journal of Human- Social Science: G, Linguistics & Education, 16(3). Global Journals Inc.: USA.

Oswald, K. (2023). Gender discrimination: an overview of historical and contemporary issues. In *Journal of the International Academy for Case Studies* (Vol. 29, Issue 1).

Yekini, T. M. (2022). A Masculinist Investigation Of Male Representations In Selected Novels Of Calixthe Beyala. Unpublished Doctoral Thesis in the Department of European Studies, University of Ibadan. P. 30,149-150.

CHALLENGES OF INCLUSIVE LIBRARY SERVICES FOR EFFECTIVE LEARNING AMONG PEOPLE LIVING WITH DISABILITIES IN ACADEMIC LIBRARIES IN ZAMFARA STATE NIGERIA

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Abstract

This paper attempted to examine some challenges of inclusive library services for effective service delivery in academic libraries in Zamfara state, Nigeria. Descriptive survey research design was used for the study, the population of the study was 13 academic librarians in the colleges of education under study. Self-structured questionnaire was used as an instrument for data collection from respondents, the instruments were validated by three experts who found the instrument valid for the study after making some corrections. The major findings of this study indictaed that the libraries under study lack facilities and materials to render inclusive library services to people living with disabilities and the academic librarians under study have no relevant training on how to handle or provide the services. Recommendations includes: Provision access point/way for the people living with disabilities, provision of relevant leaning materials to support their education, training and retraining of academic librarians on how to provide inclusive services. The paper's originality lies in examine challenges facing inclusive library services for effective learning among people living with disabilities in academic libraries in Zamfara state Nigeria

Key words: *Inclusive library, academic libraries, people living with disabilities.*

Introduction

Information is very important to all people irrespective of status and provision of library services to all users without discrimination is one of the main agenda of libraries in 21st century. A library is a collection of books and other forms of records and resources (printed and non-printed), housed, organized and interpreted to meet the broad varying needs of students, staff and others for information, recreation and inspiration. There are different types of library, of which the academic library is one of them. According to Muazu (2020) Academic libraries are libraries located at tertiary institutions of learning such as Universities, Polytechnics, Colleges and research institutions that support teaching and research. Academic libraries facilitate students learning and support research.

Academic library is the nerve centre of every institution of learning. It is the knowledge power house that makes behavioral study life of students and lecturers perfect. Academic libraries as reservoir of information are the most reliable information reference centre where users can seek information for building their profession. According to Sobalage and Ogunmodede (2015) Academic library is a library established to cater for the information needs of students, lectures, researchers and other community of scholar. In spite of the ever-growing realization of the need for effective library service provision to all students by the academic libraries, inclusive library services still suffer neglect.

One of the most pleasant feelings a person can have is to feel free and included. To participate independently and sense that others value your participation and appreciate your contributions can create a feeling of belonging and promote positive mental health. As the central meeting space and often one of the largest spaces in a school, the school's library, Learning Commons, Center for Inquiry, Media Center, or whatever it may be called should be a place that promotes this sense of belonging. Academic library has many considerations for its students' needs, including lending policies, facilities, services, and resources (Foster, 2006). Access is the key. As academic librarians, it is a duty to be accessibility ambassadors and empower all students and staff who enter the doors. University, today are tremendously diverse and with this diversity comes individual differences in terms of norms, behaviors, and values. As such, this called for inclusive library services in academic libraries.

An inclusive library is a vital community resource, addressing the diverse information needs of all members in the community. According to Grassi (2013), inclusion is an approach to library service that involves patrons with disabilities in an equitable way. He further stated that if the library does everything to meet the varied needs of patrons with special needs, they are truly being inclusive. Inclusive library service in this paper means the academic library having students living with disability in mind during the conceptualization of its services, building construction of the library should pay attention to adding some aids like lifts and flat climbing steps for wheel chairs, acquisition of their information resources and employment of trained staff specifically for them. Promoting inclusion is the key for reducing or removing several barriers facing people with physical disabilities.

Physical disabilities refer to any physical limitations of a person which inhibits him to carry out some functions independently. Common physical disabilities include blindness, deafness, dumbness, and retardation, muscular, nervous, and sensory disorders. According to Abubakar (2020) define physical disabled person as a person who is physically disabled in such a way that his/her mobility is seriously restricted and includes a person who uses a wheelchair, crutches, braces or other mobility assisting devices. There are different causes of physical disabilities which include inherited or genetic disorders, serious illnesses, and injury. Physical disabilities can happen as a result of one of the discussed causes. According to Sambo (2016), the people living with disabilities encounter barriers in their quest for education especially in the area of access to educational resources and some architectural buildings which have discouraged many physically challenged persons from visiting the library.

In addition, American Librarian Association (ALA) bill of rights states that "A person's right to use a library should not be denied or abridged because of origin, age, background, or views" (ALA,1939). In response to this, libraries have been tasked to provide inclusive library services in order to accommodate all library users. This calls for libraries to ensure that physical structures, resources and services meet the needs of all users regardless of one's condition and ability (Majinge & Stilwell, 2013). In this regard, academic libraries should be committed in providing equal access to all categories of students, whether normal or challenged users. This paper determine the challenges of inclusive library services for effective learning among people living with disabilities in academic libraries in Zamfara State Nigeria.

Statement of the Problem

Access to library services is right to all staff and students in an institutions of learning irrespective of the status (whether physically challenged or not). This would no doubt support teaching, learning and research, as such this provision becomes imperative.

The structure and services being provided in academic libraries is almost exclusive in nature without provision for people living disabilities, right from the materials (Collection Development) these categories of people are not included, the architectural design of the academic libraries are not accessible to these type of people among others. These prevent them from having access to the varieties of information resources available in these libraries. This call for the need to provide inclusive service in academic libraries to people living with disabilities and challenges faces by the academic libraries in an attempt to provide such services.

Objective of the study

The main objective is to find out challenges of inclusive library services for effective learning among people living with disabilities in academic libraries in Zamfara state Nigeria. The specific objective is to:

1. Find out challenges facing inclusive library services for effective learning among people living with disabilities in academic libraries in North West Nigeria.

Inclusive Services in Academic Libraries

Academic libraries provide variety of services to support the teaching, learning and research of their parent institutions. There are so many inclusive services libraries should provide to help meet the information needs of students with disabilities. Some of the services include:

1. ***Inclusive Circulation Services:*** The circulation section of the academic library provides charging and discharging services of library materials to users. Libraries offering inclusive services should be able to provide library resources in different formats. Registration of library users is done at the circulation section.

2. ***Inclusive Reference Services:*** The reference section of the academic library is the information service unit where user's information needs are taken care of. In the words of Katherine, Gatenby and Chittenden (2008), when students with disabilities come into the library, reference staff should focus on their information needs and not be distracted by the disability.

3. ***Inclusive Personnel Services****:* Personnel service here is all about deployment of staff in the academic library to serve as helping hands to students with disabilities. Echezona, Osadebe and Asogwa (2021) talking from experience in Access and Syracuse University said that handicapped students show strong preferences for oral readings. For that reason, staff needs to be deployed in academic libraries to serve as readers and helpers to students with disabilities.

4. ***Inclusive Internet Services:*** This consists of using the World Wide Web to access information. For a functional inclusive library service, libraries needs to make published materials available in electronic form. Library computer desks need to be moderate and not high so that users on wheel chairs and clutches can browse comfortably just like every other student.

Inclusive Current Awareness Services

This is more of keeping the users up to date in their areas of interest. As disabilities are of different types, so are their information resources. Some of them use Braille, talking books, screen reader, word board and so on. For inclusive current awareness service, different format has to be adopted to circulate the information.

Resources Needed for Inclusive Library Services

Inclusive library services require the use of special materials for people with physical disabilities; the following are some of the resources needed to support learning of people with disabilities such as.

1**.** ***For the visually impaired users:*** The library should provide them with repackaged information materials that can be used into Braille format. Books can be repackaged into talking books, talking newspapers in the form of sound recordings. Eskay and Chima (2013) identified library and information resources for the blind and visually impaired to include:

•***Braille books:*** Braille is a system of reading and writing whereby raised dots are used to represent letters which are read by touch. Braille books are approximate for users who have both visual and hearing problems.

•***Talking books:*** These are audio versions of books that could be recorded on cassettes, CD-Rom, DVD and the Internet as e-books. Talking books are preferred by the majority of the visually impaired.

•***Talking newspapers:*** These are Audio recordings of news articles in the dailies. Library services provided to the disabled students in Nigeria universities are lending, referral, current awareness, document delivery, photocopying, bindery, translation, consultancy, online database searching, user education, current contents listing, provision of large print materials, Braille collections, Braille machines, provision of talk books, provision of walking stick slot, provision of reading loud machine, elevators, provision of ramps at the entrance, technical writing, selective dissemination of information and data processing. Provision of all these services to the disabled users at ease will motivate and encourage their patronage in the library

•Large printed materials: These are documents printed in large fonts for use by partially sighted users.

A broad range of ICTs otherwise called adaptive or assistive technologies are now available to provide access to information in electronic database and on the Internet, giving blind users equal opportunity as the sighted (Eskay & Chima, 2013). These innovative technologies or assistive technology devices include:

•Screen Magnifier: This is software that allow text or graphics on computer screen to be magnified up to sixteen times the original size.

•Screen Reader: A software that reads out the content of a document to the learner. It is a software programme that works in conjunction with a speech synthesizer to provide verbalization of everything on the screen including menus, text and punctuation. It gives persons with visual impairment direct access to the world of print. It helps a blind person to read freely at his own pace without assistance.

•Voice Recognition Software: This allows the user to input data into the computer by voice.

•Braille Translation Software: Translate text and formatting into appropriate Braille characters and format.

•Braille writing Equipment: Used for creation of paper Braille materials. It can be manual or electronic devices.

•Scan and read software: Reads books and other print materials aloud

•Jaws Screen Reader: A program that allows users to listen to the contents of the computer screen

2.**For the Hearing Impaired Users**: In the case of hearing impaired users of the library, the academic libraries should provide them with low teaching materials that relate to literature-based reading; book reviewing; story telling programmes; and teaching them library skills through signs. Other ways through which libraries can serve them is through organizing activities with parents in the form of finger spelling, lip reading, bliss symbolic, teaching videos, CD-ROMS

with dictionaries, language stimulating materials (games like puzzles, chess), and providing induction loop (Ajogwu,2006).

3**. For the Physically Disabled Users:** In the case of building structure, established library building should be modernized with the needs of users with disability in mind. Emerging buildings should include ramps and lifts for easy movement. There is the need for special adaptation of the environment at the libraries for all the physically challenged to access the library resources. Shelves should be of moderate size, offering access to all Echezona et al, (2021). Libraries should also provide them with adjustable chairs and tables specially made for wheel chairs and crutches.

4.**For Speech Handicapped Users:** The library should provide them with communication devices used by people with difficulty in reading or talking for example word board. A word board can be as simple as words written on a piece of paper which the user points to, to communicate. This set of users do not have much problem in making use of the library because they can always communicate through writing on a piece of paper.

Benefits of Inclusive library services

Inclusive library services in academic libraries provide people living with disabilities a chance to have access to huge information resources available in academic libraries and support their learning. Inclusion has many benefits, some of which are:

1. Provision of inclusive library services ensure belonging, acceptance, and developmentally appropriate practices to the people with physical disabilities.
2. Inclusive academic library services teaches people with physical disabilities typically developing skills and give them chance to access available information resources in libraries.
3. It provides an opportunity for people with physical disabilities to feel a sense of belonging and develop friendships (Grassi, 2013).

Challenges Faced by Academic Library Professionals in Inclusive Library Provision

Academic libraries especially in Nigeria face a lot of hindrances in providing inclusive services to people living with disabilities. These problems of inclusive library service in academic libraries as identified by Grassi (2013) are as follows.

1. Lack of skilled manpower to produce the material needed by the handicapped may result in poor production of the materials. This also affects operation and maintenance of equipment needed for inclusive library service.

2. Lack of properly trained library personnel. This problem originated from the library schools. The curricula of most library schools are geared towards conventional librarianship. Library staff are therefore often unable to attend to the needs of the blind.
3. Importation often poses the problem of obtaining materials that do not relate to the culture and background of the students.
4. Architectural barriers: Most of the older libraries especially University libraries were built before the era of inclusive education. Therefore, such barriers such as steps, high book shelves, narrow doorways and lack of elevators are still prevalent in some libraries. These obstacles can be extremely frustrating, if not impossible for the handicapped students to cope with.

Research Method

Descriptive research design was used for the study. The population of the study would comprise 13 academic librarians, 09 academic librarians from FCET Gusau as well as 04 academic librarians from COE Maru, all in Zamfara state North West Nigeria. No sampling technique used because the population is manageable. The data collected was analyzed using descriptive statistics by the use of percentage.

Data Presentation and Analysis

The data collected from respondents through questionnaire from the survey. It also present its corresponding analysis and interpretations.

Research Question: What are the challenges facing inclusive library services for effective learning among people living with disabilities in academic libraries in North West Nigeria?

Instruction: Please tick the option you prefer guided by the key below:

SA: Strongly Agreed, A: Agree, Disagree, SD: Strongly Disagree

S/N	**ITEMS STATEMENT**	**SA**	**A**	**SD**	**D**
1.	Lack of skilled manpower to produce the material needed by the handicapped results in poor production of inclusive materials	09(69%)	04(31%)	-	-
2.	Lack of properly trained library personnel affect provision of inclusive library services	13(100%)	-	-	-
3.	Importation often poses the problem of obtaining materials that do not relate to the culture and background of the students	13(100%)	-	-	-
4.	Architectural design of libraries make it inaccessible by people living with disabilities	13 (100%)	-	-	-
5.	Lack of relevant materials for people living with disability	13(100%)		-	-
6.	Poor budget contribute to the challenges in provision of inclusive library services in academic libraries	12(92%)	01 (08%)	-	-
7.	No toilet accommodating people living with disabilities	13 (100%)	-	-	-
8.	Height of shelves	13 (100%)	-	-	-

9.	Height of tables	13 (100%)	-	-	-
10.	Lack of assistive technology	13 (100%)	-	-	-

(Source: Filed survey, 2023)

Table above shows that 09 representing (69%) of the respondents strongly agreed that lack of skilled manpower to produce the material needed by the handicapped results in poor production of inclusive materials, 13 representing (100%) strongly agreed that importation often poses the problem of obtaining materials, 13 representing (100%) of the respondents made it clear that architectural design of libraries make it inaccessible by people living with disabilities, lack of relevant materials for people living with disability, poor budget contribute to the challenges in provision of inclusive library services in academic libraries, no toilet accommodating people living with disabilities, height of shelves and table and lack of assistive technology.

Conclusions

It is evidently clear from the findings of the study that the academic libraries under study faces a lots of challenges in provision of inclusive library services to people living with disabilities. Several obstacles were revealed that hinders provision of this service among which are architectural design of the libraries, poor training by library staff on how to provide inclusive services and absent of relevant materials to render inclusive services among others.

Recommendations

Based on the findings of the study, the researechers forward the following recommendations:

i. Provision access point/way for the people living with disabilities
ii. Provision of relevant leaning materials to support their education

Training and retraining of academic librarians on how to provide inclusive services

References

Abubakar, H. (2020). Academic libraries in Nigeria. Sterling publisher

American Library Association (1939). 'ALA code of ethics and bill of rights': http://files.rvcog.org/ftp//0_JCLD/District%20Policies/ALA_Code_of_Ethics_and_ Library_Bill_of_Rights.

Ajogwu, M.N. (2006). The role of non-governmental organization (NGOs) in providing library and information services in two disadvantaged groups in Nigeria. Global Review of Library and Information Science, 2(1), 78-89.

Echezona, R.I, Osadebe, N. & Asogwa, B.E. (2011). Library services to the physically challenged: nature, challenges and strategies. Journal of Applied Information Science and Technology 5(1), 13-18.

Eskay, M. & Chima, J.N. (2013). Library and information science delivery for the blind and physically challenged in University of Nigeria Nsukka Library. European Academic Research, 1(5). file://DOCUME-1/MTN/LOCALS-1/Temp/43

Grassi, R. (2013). What does inclusion mean to you? http://www.alsc.ala.org

Sambo, A.S. (2016). Physically challenged students and their information needs. Library Philosophy and Practice (e-journal). http://www.digitalcommons.unl.edu/libphilprac/1461

Sobalage, A.J., & Ogunmodede, T.A. (2015). Roles of academic libraries in the national and

Economic development of Nigeria. Greener Journal of Social Sciences 5(2) 36-41.

Majinge, R. M. & Stitwell, C. (2013). 'Library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania' South African Journal of Libraries and Information Science, 79 (2).

Muazu, B. (2020). *Academic libraries*. Hudahuda

Forest, M. (2006). 'Towards an accessible academic library: Using IFLA checklist' *IFLA Journal,*

32 (1).