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Awareness on the Impact of Imparting Science and Technology Knowledge to Youths for Self-Reliance and Sustainable Technology Development in Katsina State

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ABSTRACT

This study investigates the awareness and perceived impact of imparting science and technology knowledge to youths in Katsina State, Nigeria, with a focus on fostering self-reliance and contributing to sustainable technology development. In recent years, the importance of science and technology education in empowering youths for economic independence and driving sustainable development has gained prominence globally. However, the specific context of Katsina State, known for its rich cultural heritage, necessitates an exploration of the awareness levels and potential impact of science and technology education initiatives. The research employs a mixed-methods approach, combining surveys and interviews, to collect data from various stakeholders, including educators, students and community members. The study assesses the current awareness levels of science and technology education initiatives and explores perceptions regarding their effectiveness in promoting self-reliance among the youth population. findings indicate varying levels of awareness among stakeholders, with some expressing optimism about the transformative potential of science and technology education, while others highlight existing challenges. The study identifies key factors influencing awareness, such as accessibility to educational resources, community engagement and the alignment of curricula with local needs. The outcomes of this study should inform policymakers, educators and community leaders about the effectiveness of current initiatives, enabling strategic improvements to enhance the impact of science and technology education on youths for self-reliance and sustainable technology development in Katsina State.

Key words: Science and Technology; Knowledge; Youths; Development

1. Introduction

The burgeoning landscape of self-reliance and sustainable technology development in Katsina State, Nigeria, hinges fundamentally on the awareness and efficacy of imparting science and technology knowledge to its youth population. As we stand at the precipice of technological advancement, understanding the impact of nurturing a generation well-versed in science and technology becomes pivotal for the socio-economic fabric of the state. This research delves into the nuanced dimensions of how cultivating awareness and knowledge in science and technology among the youth can serve as a catalyst for self-reliance and contribute to sustainable technological development in Katsina State. In a global context increasingly shaped by technological innovation, the imperative for localities to harness the potential of their youth through science and technology education is more pronounced than ever. Katsina State, with its unique cultural tapestry and economic landscape, stands to benefit significantly from a populace equipped with the skills and insights derived from science and technology. This research seeks to shed light on the prevailing awareness levels regarding the impact of imparting such knowledge, exploring the current state of science and technology education in the state and its correlation with self-reliance and sustainable technological development. As we embark on this inquiry, the overarching objective is to provide a comprehensive understanding of the existing awareness levels within Katsina State regarding the role of science and technology education in fostering self-reliance. The research will assess the current educational infrastructure, teaching methodologies, and the alignment of curricula with the evolving demands of the technological landscape. Furthermore, it aims to explore the perceptions and attitudes of both educators and students towards science and technology education, gauging the degree to which it is perceived as a pathway to self-reliance and sustainable technological development. Through a systematic analysis of the awareness landscape, this research aspires to offer insights that can inform policy, educational strategies and community initiatives aimed at enhancing the role of science and technology education in Katsina State. By illuminating the current scenario and its potential impact, the research endeavors to contribute meaningfully to the ongoing discourse on empowering the youth for self-reliance and sustainable technology development in the dynamic context of Katsina State.

Quality science education hinges on embracing and upholding the principles of freedom of inquiry and expression. The commitment to these principles is essential, as without the freedom to inquire, the scientific process would be overshadowed by coercion rather than the pursuit of knowledge through investigation. It is imperative to instill robust investigative skills in students from an early age to foster critical and scientific thinking as they mature (Omole et al., 2014). Facilitating the development of these skills is crucial, and this can be achieved by providing students with ample opportunities to explore. It is equally important to alleviate any tensions associated with assessment in their minds. Encouraging hands-on activities in the learning process not only makes science more tangible and practical for students but also stimulates critical thinking and exploration. This approach ultimately contributes to sustainable development in the realm of scientific understanding.

Science Education Relevance

Relevance in this context pertains to the direct connection between the subject under consideration and the discussion at hand. In this paper, the focus is on establishing a direct link between Science, Technology, and Mathematics Education (STME) and the concept of self-reliance. Despite Nigeria's abundance of human and natural resources, the country remains among the world's poorest and underdeveloped nations. A disconcerting consequence of this disparity is the presence of numerous graduates from the nation's educational system who find themselves unemployed and actively seeking jobs (Nwachukwu, 2009). This situation contradicts the objectives outlined in the National Policy on Education (FRN 2004), which emphasizes the goal of nurturing a self-reliant nation. It highlights the existence of significant gaps between educational policies and their practical implementation in schools (Offorma, 2005). Ideally, graduates of a robust STME education should possess the skills needed for self-reliance, enabling them to secure employment and progress in their chosen fields. STME should empower individuals to be self-employed in various enterprises. However, the delivery of Science, Technology, and Mathematics Education often leans toward theoretical approaches due to a lack of competent teachers or the necessary equipment to facilitate practical-oriented learning (Offorma, 2005). Consequently, students graduate without hands-on skills and a lack of "minds-on" experience, diminishing the relevance of STME in cultivating the essential skills for self-reliance.

Nigerian Peculiarity on science and technology

Teaching and incorporating sustainability into our daily lives is essential, but the question remains: how can we effectively achieve this? The introduction of sustainability as a standalone subject in the formal school curriculum may be perceived as an additional burden to be learned but not necessarily practiced. Despite this perception, integrating sustainability into formal education remains one of the quickest ways to raise awareness of the concept among future generations. The sustainability message, however, needs to be consistently taught at all educational levels to ensure lasting impact (Mukute, 2010; Hamiti and Wydler, 2014). The expansion of educational facilities brings about a conflict in resource allocation for governments. In some areas, the availability of facilities does not guarantee access to primary schooling due to financial constraints, such as the inability to pay school fees. Disparities in who bears the cost of education exist, ranging from direct payments by parents to indirect contributions through taxes or a combination of fees and taxes. This financial burden varies depending on individual family incomes and economic resource endowments, posing challenges to universal basic education, which, although intended to be free, often incurs additional costs for transportation, feeding, school uniforms, books, and stationery fees, particularly in large family settings (Otive, 2006). Creating awareness extends beyond the confines of the classroom to the larger population, including those who have not undergone any formal education but are stakeholders in understanding sustainability issues. Leveraging the Nigerian penchant for entertainment and extensive television consumption, values can be conveyed through public media using indigenous languages, utilizing enlightenment programs, dramas, and films as effective mediums (Nnabuo, P. O. M & Asodike, J. D. 2005). An additional concern for Nigeria is the uncontrollable and unchecked population growth, prompting the government to acknowledge the need for decisive measures. President Goodluck Jonathan signaled a policy shift, anticipating legislation on birth control to address the impending population 'explosion.' As of July 2012, Nigeria's population projection was approximately 171 million, growing at an alarming rate of 3.2 per cent (National Population Commission [NPC]). Emphasizing the importance of reliable data and statistics for meaningful planning, the president cautioned against exploiting population and demographic issues for political gain (Buki, 2012).

Improving Basic Education in Nigeria

Various countries have distinct definitions of basic education, ranging from the ability to read and write to the completion of a specific class or the attainment of a particular certificate. The adequacy of basic education levels varies globally, posing a significant challenge to national aspirations for sustainable development. In the case of Nigeria, Basic Education encompasses both formal schooling and a diverse array of non-formal and formal public and private educational activities tailored to meet the learning needs of diverse age groups. This includes early childhood and pre-primary education, primary education, the initial three years of secondary education, and basic and functional literacy programs for out-of-school children, youth, and adults. Additionally, it extends to nomadic education for school-age children of nomads and migrant fishermen, and may also encompass adult literacy (Olorunfemi, 2012).

Science and Entrepreneurship Education

Science, Technology, and Mathematics Education (STME) have been identified as indispensable factors in the economic development of any country, with a particularly critical role in the context of Nigeria (Suleman, 2010). A historical overview highlights the interconnectivity of science, technology, and mathematics education. To grasp the concept of science and technology education comprehensively, it is crucial to delve into Nigeria's National Policy on Education (2004). The policy aims to foster self-realization, better human relationships, individual and national efficiency, effective citizenship,

national consciousness, unity, and advancements in socio-cultural, economic, political, scientific, and technological spheres. Education, as defined by Oranu (2007), is a learning process that brings about a relatively permanent change in behavior or capability resulting from experience. It is a vital process of socialization through which individuals acquire behaviors essential for effective participation in society. Science, viewed as the most powerful tool for human development by Okafor (2011), is integral to science education, which strives to produce a scientifically literate society capable of national development.

Technology, focusing on the practical application of skills to produce useful goods, is a critical aspect of education for effective employment, wealth creation, and self-reliance (Nwokoye, 2011). Technology education involves exposing individuals to practical tasks to develop and produce goods and services meeting human needs and wants (Ibeneme, 2013). It contributes to improving efficiency, quality of life, and increasing survival chances. Eyibe (2009) emphasizes that technology education encompasses scientific, technological, and engineering knowledge, as well as other forms of technical know-how applied to produce goods, services, and generate further knowledge. Nigeria, recognizing the need for quality science and technology education to alleviate poverty and achieve sustainable national development, has made strides in various fields, including medicine, machine fittings production, transport, and communication.

Inculcating Science and Technology Education in the Youths

The advancement of Nigeria is intricately tied to a robust orientation towards the study and application of science and technology. Scientific and technological progress, as crucial resources for self-reliance and sustainable development, should be highly valued within Nigerian society. Recognizing the pivotal role of science and technology in development, concerted efforts need to be undertaken by Nigerians to cultivate a culture of science and technology among the youth, fostering a foundation for nation-building. The strategic promotion of science and technology education among the youth requires the adequate provision and utilization of material and human resources. Enhanced study and exposure to science and technology among Nigerian youth will propel the nation towards becoming a developed nation (Amarachukwu, 2011).

Demonstrating technological consciousness for the improvement of science and technology in Nigeria begins with ensuring effective science and technology education in Nigerian schools. Investing in youths through education is a significant gain, as education serves as a vital resource for nation-building. To instill an appreciation for science and technology among the youth, their interest must be heightened. Any measure taken to promote science and technology education among students serves as a means of sustaining their interest in these fields. It is advisable for students to develop a keen interest in the study of science because technology is rooted in science (Nwosu, 2010). The teaching of science and technology should adopt a practical approach, necessitating the provision of adequate equipment, laboratories, and workshops. Additionally, teachers engaged in teaching science and technology should demonstrate dedication and hard work.

Research Questions

The following questions was raised before commencement of the research

i. What is the current awareness levels among youths in katsina state regarding the importance of imparting science and technology knowledge?

ii. What are the benefit and challenges associated with imparting science and technology knowledge to youth?

iii. What are the strategies for enhancing awareness levels and promoting the positive impact of imparting science and technology knowledge to youth?

Objectives of the Study

The aim of this research is to give awareness on the impact of imparting science and technology knowledge to youths for self-reliance and sustainable technology development in Nigeria though the following objectives:

i. To evaluate the current awareness levels among youths in katsina state regarding the importance of imparting science and technology knowledge.

ii. To identify and analyses benefit and challenges associated with imparting science and technology knowledge to youth

iii. To explore effective strategies for enhancing awareness levels and promoting the positive impact of imparting science and technology knowledge to youth

2. Research Method

2.1 Research Design

We carried out a survey of 350 students and teachers from different schools, using questionnaires and simple percentages statistical technique of evaluation to investigate the factors influencing technology innovation and sustainable entrepreneurship in Katsina state of Nigeria. The sample design is a random

survey of students and teachers from the selected schools. The sample questions were designed to cover some selected factors influencing enterprise technology innovation

2.2 Method of Data collection

The oral consent of each participant will be sought before commencing this study.

Questionnaires to determine age of the respondent, gender of the respondent, educational level and religion of the respondent was used to gather the complete information of the Participants.

2.3 Statistical analysis

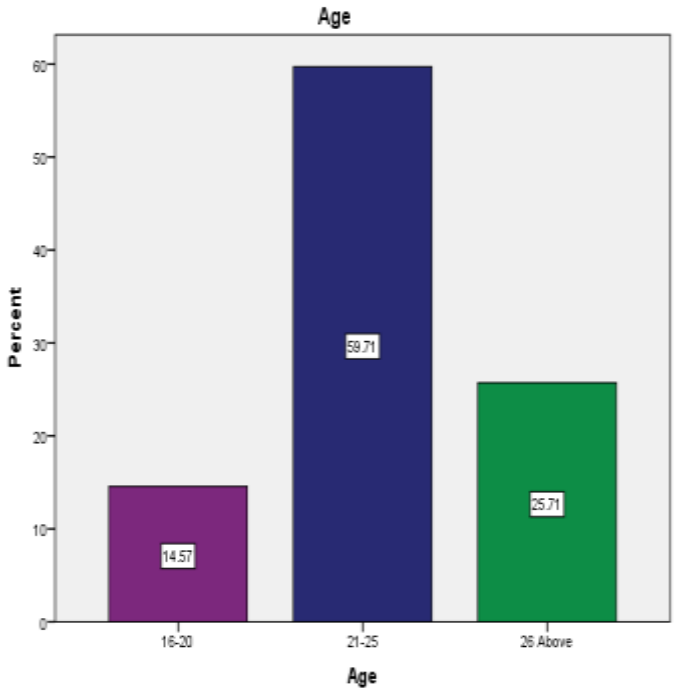
Replies and reviews from the questionnaire were analyzed using the Descriptive statistics of frequency counts and percentages, in analyzing demographic variables and research questions. Analysis of the data obtained for this study was performed using the Statistical Package for Social Sciences (SPSS version 23.0) for Windows. Frequency table descriptive analysis and simple percentage was used to analysed the data collected from the respondent's views.

3.0 Results and Discussion

The personal data of the respondents under the study which includes Age, gender, educational level, as well as the respondent's religion was analysed.

Gender of the respondent	**Frequency**	**Percentage**	**Mean**	**Standard deviation**
Male	142	40.6%	1.59	0.492
Female	208	59.4%		
Total	350	100%		
Age of the respondents				
16-20	51	14.6%	2.11	0.626
21-25	209	59.7%		
26-above	90	25.7%		
Total	350	100%		
Religion				
Islam	281	80.3%	1.21	0.426
Christianity	66	18.9%		
Traditional	3	0.9%		
Total	350	100.0		
Education level				
Primary	43	12.3%	2.34	0.687
Secondary	144	41.1%		
Tertiary	163	46.6%		
Total	350	100%		

Table 1. Demographic representation of the respondents



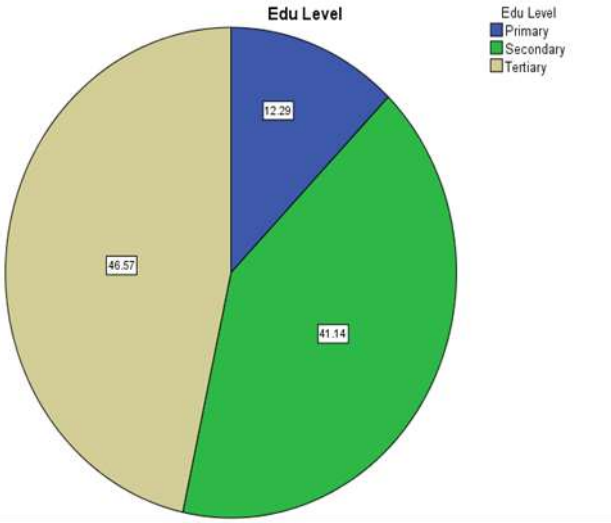


Fig. 1. Barchart representing the age of the respondents

Fig. 2. Pictorial diagram representing educational level of the respondents

Table 1 and above figures outlines the demographic characteristics of the respondents, offering valuable insights into the composition of the study participants. Notably, the data reflects a balanced gender representation, with 40.6% of respondents identifying as male and 59.4% as female. This gender diversity enhances the study's comprehensiveness, ensuring a nuanced understanding of perspectives. The findings also reveal a significant presence of respondents in the 21-25 age group, constituting 59.7% of the participants. Additionally, 14.6% fall within the 16-20 age range, while 25.7% are aged 26 and above. This age diversity provides a holistic view, capturing the perspectives of both youth and young adults in the survey. Morealso, Religious affiliation emerges as another key aspect, with the majority (80.3%) of respondents identifying as followers of Islam. Meanwhile, 18.9% align with Christianity, and a small percentage (0.9%) associate with Traditional beliefs. This religious diversity ensures a representative sample, contributing to the richness of insights gathered from different faith perspectives. The final segment of the table 4.1 focuses on the educational background of the respondents. A notable 46.6% have tertiary education, 41.1% completed secondary education, and 12.3% finished primary education. This diversity in educational

attainment levels strengthens the study, providing a comprehensive understanding of the impact of science and technology knowledge across various educational backgrounds.

The research analyzed and discusses the data collected in respect of questionnaire distributed and interview to the respondents. The respond of the respondent from the questionnaire are discuss in the tables below.

Research Question 1: What is the current awareness levels among youths in katsina state regarding the importance of imparting science and technology knowledge?

Questions	**Strongly Agree**	**%**	**Agree**	**%**	**Neutral**	**%**	**Disagree**	**%**	**Strongly Disagree**	**%**
To what extent do you agree with the importance of science and technology knowledge for self-reliance and sustainable technology development?	60	19.7	168	48.0	91	26.0	18	5.1	4	1.1
You participate in science and technology-related programs or initiatives in Katsina State?	90	25.7	108	30.9	109	31.1	32	9.1	11	3.1

Table 2. Current awareness levels among youths regarding the imparting science and technology knowledge

Research Question 2: What are the benefit and challenges associated with imparting science and technology knowledge to youth?

What is your level of agreement with the effectiveness of the following mediums in promoting awareness of science and technology knowledge among youths?	**Strongly Agree**	**%**	**Agree**	**%**	**Neutral**	**%**	**Disagree**	**%**	**Strongly Disagree**	**%**
Formal Education	19	5.4	44	12.6	5	1.4	101	28.9	181	51.7
Media (TV, Radio, Newspaper)	80	22.9	226	64.6	23	6.6	16	4.4	5	1.4
Internet	79	22.6	228	65.1	23	6.6	16	4.6	4	1.1
Community programs	12	3.4	41	11.7	20	5.7	94	26.9	183	52.3

Table 3. Benefit and challenges associated with imparting science and technology knowledge to youth

Research Question 3: What are the strategies for enhancing awareness levels and promoting the positive impact of imparting science and technology knowledge to youth?

Questions	**Strongly Agree**	**%**	**Agree**	**%**	**Neutral**	**%**	**Disagree**	**%**	**Strongly Disagree**	**%**
To what extent do you agree that imparting science and technology knowledge to	255	72.9	45	12.9	41	11.7	6	1.7	3	0.9

youths in Katsina State has significant benefits?										
To what extent do you agree that there significant challenges or barriers to imparting science and technology knowledge to youths in Katsina State?	147	42.0	134	38.3	43	12.3	21	6.0	5	1.4
To what extent do you agree with the effectiveness of the following strategies for improving awareness on science technology knowledge among youths in Katsina State.(increase educational programs, more accessible resources, community outreach, collaboration	246	70.3	94	26.9	6	1.7	4	1.1	0	0.0

Table 4. Strategies for enhancing awareness levels and promoting the positive impact of imparting science and technology knowledge

Hypothesis test

(H0): There is no significant difference in the mean participation in science and technology-related programs between males and females in Katsina State.

(H1): There is a significant difference in the mean participation in science and technology-related programs between males and females in Katsina State.

	Gender	N	Mean	Std. Deviation	Std. Error Mean
You participate in science and technology-related programs or initiatives in Katsina State?	Male	142	2.25	.941	.079
	Female	208	2.38	1.123	.078

Table 5. Group Statistics Independent T-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
You participate in science and technology-related programs or initiatives in Katsina State?	Equal variances assumed	5.896	.016	-1.143	348	.254	-.131	.115	-.357	.094
	Equal variances not assumed			-1.182	333.675	.238	-.131	.111	-.349	.087

Table 6. Independent Samples Test to participate in science and technology-related programs or initiatives

Discussion of the Results

The table 2. presents frequencies and percentages of respondents' agreement levels regarding the importance of science and technology knowledge for self-reliance and sustainable technology development. It's notable that a significant proportion of respondents either strongly agree (SA) or agree (A), comprising 67.7% combined. This suggests a prevailing recognition among the majority of respondents regarding the crucial role of science and technology in fostering self-reliance and sustainable technology development. However, there is a noteworthy minority (31.1%) who express neutral (N), disagree (D), or strongly disagree (SD) sentiments. Understanding and addressing the concerns of this minority could be essential for promoting broader awareness and buy-in for initiatives aimed at enhancing science and technology education and its implications for societal development in Katsina State. The table also displays frequencies and percentages of respondents' participation levels in science and technology-related programs or initiatives in Katsina State. It's evident that a considerable portion of respondents (56.6%) either strongly agree (SA) or agree (A) with their participation. However, a notable proportion (40.3%) either express neutral (N), disagree (D), or strongly disagree (SD) sentiments. This suggests there may be untapped potential or barriers preventing broader engagement in science and technology-related activities in Katsina State. Understanding the reasons behind these responses could inform strategies to increase participation and maximize the impact of science and technology initiatives in the region.

Table 3 provides understandings into respondents' perceptions of the effectiveness of various mediums in promoting awareness of science and technology knowledge among youths in Katsina State. Notably, there is a striking contrast between the perceived effectiveness of traditional formal education and that of non-traditional mediums. A significant majority, constituting 80.6% of respondents, expressed skepticism or outright disagreement with the effectiveness of formal education in adequately promoting science and technology knowledge among youths. This suggests a prevailing sentiment among respondents that the traditional educational system may be insufficient in addressing the needs and interests of young people in the realm of science and technology. Conversely, non-traditional mediums such as TV, radio, newspapers, and the internet received markedly higher levels of positive responses regarding their effectiveness. With 87.5% of respondents either strongly agreeing or agreeing with the efficacy of media platforms and 87.7% expressing similar sentiments towards the internet, it is evident that these channels play a pivotal role in disseminating information and raising awareness about science and technology topics among youths in Katsina State. This underscores the importance of leveraging digital and media platforms to bridge gaps in traditional educational approaches and reach a broader audience with relevant content. However, despite the effectiveness attributed to non-traditional mediums, community programs received the lowest level of positive responses, with only 15.1% of respondents expressing agreement or strong agreement regarding their effectiveness. This suggests that there may be areas for improvement or opportunities for investment in community-based initiatives aimed at enhancing science and technology awareness among youths in the region. Addressing these gaps and diversifying outreach efforts could be essential for fostering greater engagement and interest in science and technology among Katsina State's youth population.

Morealso, table 4 illustrates respondents' perceptions regarding the presence of significant challenges or barriers to imparting science and technology knowledge to youths in Katsina State. A considerable majority, comprising 80.3% of respondents, either strongly agree or agree with this notion, highlighting a widespread recognition of obstacles hindering effective education in these fields. Specifically, 42.0% of respondents strongly agree, while 38.3% agree. Conversely, only a small minority, totaling 7.4% (6.0% disagree and 1.4% strongly disagree), express dissenting views, indicating a consensus among respondents regarding the existence of substantial challenges or barriers. This collective acknowledgment underscores the importance of addressing these obstacles to improve science and technology education outcomes and foster innovation and development among youths in Katsina State. The table also presents respondents' agreement levels regarding the effectiveness of various strategies for improving awareness of science and technology knowledge among youths in Katsina State. A significant majority of respondents, accounting for 97.2% of the total, either strongly agree (SA) or agree (A) with the effectiveness of these strategies. Specifically, 70.3% of respondents strongly agree, while 26.9% agree. Only a negligible proportion, comprising 2.8% (1.7% neutral and 1.1% disagree), express reservations or dissenting views. This overwhelming consensus underscores the perceived effectiveness of increasing educational programs, providing more accessible resources, engaging in community outreach, and fostering collaboration as viable strategies for enhancing awareness of science and technology knowledge among youths in Katsina State.

Table 5 and Table 6 shows The independent t-test that was conducted to compare the mean participation in science and technology-related programs between males and females in Katsina State. The null hypothesis (H0) stated that there is no significant difference in the mean participation between the two genders, while the alternative hypothesis (H1) proposed that there is a significant difference. The results of the t-test indicate that there is no statistically significant difference in the mean participation between males and females in science and technology-related programs in Katsina State. The p-value obtained from the t-test is greater than the significance level of 0.05, both when equal variances are assumed ($p = 0.254$) and when they are not assumed ($p = 0.238$). Therefore, we fail to reject the null hypothesis. In other words, based on the data provided, there is insufficient evidence to conclude that there is a significant difference in the mean participation in science and technology-related programs between males and females in Katsina State. This suggests that gender does not play a significant role in determining the level of participation in such programs among the respondents.

4. Conclusion

The research underscores the importance of continued efforts to enhance awareness and the impact of science and technology education for youths in Katsina State. The study contributes to the ongoing dialogue on science and technology education and its potential to drive self-reliance and sustainable technology development. By addressing the identified challenges and building on the strengths of existing initiatives, Katsina State can pave the way for a more inclusive, effective, and culturally integrated approach to science and technology education, ultimately empowering its youth for a sustainable future.

5. Recommendation

Based on the results of the research, the following recommendations are proposed for consideration in the 21st century context:

- Collaborate with educational stakeholders to review and enhance the science and technology curriculum, ensuring it is up-to-date, culturally relevant, and aligned with the needs of the 21st-century workforce. Integrate practical and hands-on learning experiences to enhance skill acquisition.
- Implement digital literacy programs to equip youths with essential technological skills. Promote the use of technology in education and explore partnerships with tech companies to provide access to online resources and training.
- Invest in infrastructure development to provide better access to science and technology resources. Ensure that educational institutions have well-equipped laboratories, libraries, and technology-enabled classrooms to facilitate effective learning.
- Implement regular teacher training programs to enhance educators' knowledge and pedagogical skills in science and technology education. Foster a culture of continuous professional development to keep educators abreast of advancements in these fields.
- Foster collaborations between public institutions, private enterprises, and NGOs to create a supportive ecosystem for science and technology education. Encourage businesses to provide internships, sponsor educational initiatives and actively engage in shaping educational policies.
- Facilitate international collaboration and exchange programs to expose Katsina's youths to global perspectives in science and technology. Partner with international institutions to share best practices, resources, and experiences.

REFERENCES

Amarachukwu, N. N. (2011). imparting the knowledge of science and technology to youths for self-reliance and sustainable development in nigeria . *Multidisciplinary Journal of Research Development Volume 17 No 4* Buki, P. (2012). Managing Nigeria's Population for Sustainable Dev Posted by admin on Jul 11th, 2012. DOI= http://www.thetidenewsonline.com/2012/07/11/managingnigeria%E2%80%99s-population-for-sustainable-dev/

Eyibe, S. C (2009). Adult Education Essays in comparative Education. Onitsha: Innosco Publishers Ltd.

Federal Republic of Nigeria (2004) National policy on education. NERDC Lagos.

Federal Republic of Nigeria (2004). National Policy on Education. 4th Ed.

Hamiti, S. W and Wydler, H.(2014).Supporting the Integration of Sustainability into Higher

Education Curricula-A Case Study from Switzerland. Sustainability ISSN 2071-1050. www.mdpi.com/journal/sustainability.

Ibeneme, O. T. (2013). Technical vocational education and training and youth empowerment for national security. JONATT 1 (2) 81.

Mukute, M. (2010).Integrating Sustainability in School Curriculum and practice: The case of the schools and colleges permaculture programme in Zimbabwe. ICID+18, Fortaleza - Ceará, Brazil.

http://www.icid18.org/files/articles/938/1279514283.pdf (Accessed. July 14, 2014).

Nnabuo, P.O.M & Asodike, J.D (2005). Exploring Education as a tool for sustainable

Development in Nigeria. European Scientific Journal May edition vol. 8, No. 10. ISSN: 1857-7881 (Print) eISSN 1857-7431. 1.

Nwachukwu, C. (2009). The relevance of the science, technology and mathematics education (STME) to development of entrepreneurial skills. Proceedings of the 50th Annual Conferences of Science Teacher Association of Nigeria 312-324.

Nwokoye, S. K. (2011). The role of SIWES in realization of sustainable development in Nigeria.

JONATT 1(2) 47-48

Nwosu, F.C. (2010). Instilling quality education in science and technology among Nigeria children and youth for sustainable development in engineering. Journal of Engineering Science and Technology, 5 (1), 58 - 61.

Offorma, G.C (2005). Curriculum for wealth Creation. Paper Presented at the Seminar of the World Council for Curriculum and instruction held at Kano, Oct, 25.

Okafor, E. G. (2011) industrializing the Nigerian Society through skill acquisition of Science and Technology Education. International Research Journal of Resources and Development 3(2) 38-39.

Olorunfemi, M.O.A. (2012). The Education For All assessment (EFA): country reports Nigeria.

World Education Forum National assessment coordinator, Federal Ministry of Education, Abuja.

Omole, Catherine Ohunene, and Ozoji, Bernadette Ebele, (2014). "Science Education and Sustainable Development in Nigeria." American Journal of Educational Research, vol. 2, no. 8: 595-599. doi: 10.12691/education-2-8-6.

Oranu, R. M (2007) Vocational and Technical Education, and Man Power development in Nigeria.

JOTECH 3(2) 30-32 Otive, I. (2006) The State Of Education In Nigeria. A keynote address delivered at a roundtable organised by civil society action coalition on education for all (csacefa) on 3rd july, 2006

Suleman, S. M. (2010)The Relevance of Science, Technology and Mathematics Education (STME) in Developing Skils for Self Reliance: the Nigerian Experience, African journal of teachers education. Volume 1 No. 1 222-229