EMPOWERING SECONDARY SCHOOL STUDENTS FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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Abstract

This study adopts a conceptual research design to investigate the empowerment of secondary school students for sustainable development in Nigeria. Relying on an extensive review of existing literature, national curriculum frameworks, and global educational benchmarks particularly Sustainable Development Goal 4, Target 4.7 the study critically analyses the alignment between current educational practices and the competencies required for sustainability. Data for the analysis were derived from purposively selected scholarly articles, education policy documents, and reports by UNESCO and Nigerian educational bodies. The population of the study comprises all public the secondary schools in the study area while the sampling techniques focused on stratified random sampling of 30% with 180 participants used for the study. Through qualitative content analysis, the study identifies structural gaps such as outdated curricula, inadequate teacher training, insufficient inclusion of environmental and civic education, and lack of infrastructure as key impediments to effective student empowerment. The findings revealed a significant positive relationship between study skills and critical thinking as factor for sustainable development in Nigerian secondary schools and call for urgent curriculum reform, investment in teacher capacity development, and the integration of sustainability competencies into both formal and informal educational settings. The study concludes that without a deliberate transformation of Nigeria's secondary education landscape, the goals of sustainable national development will remain elusive.

Keywords*; Empowering, Secondary School Students, Sustainable, Development, Study skills, Critical Thinking*

Introduction

In recent decades, the concept of sustainable development has emerged as a cornerstone of national and global development planning. Defined by the Brundtland Commission as development that meets the needs of the present generation without compromising the ability of future to meet their own needs, sustainable development integrates three interdependent pillars economic growth, environmental protection, and social inclusion. In Nigeria, a country with a rapidly growing population and a youthful demographic profile, the success of sustainable development initiatives hinges largely on the extent to which young people, particularly secondary school students, are empowered to engage with and drive such efforts. Secondary school education occupies a critical position in the education system, serving as a transitional phase where students move from basic foundational knowledge to more complex cognitive, emotional, and social development. It is during this phase that students begin to form their worldviews, develop decision-making capabilities, and cultivate attitudes toward their communities and the environment. Empowering secondary school students, therefore, is not only about improving

academic outcomes but also about nurturing their potential as active contributors to societal transformation and sustainable national progress.

Empowerment in this context refers to equipping students with the necessary knowledge, values, skills, and attitudes to understand sustainability challenges and to act constructively in addressing them. This includes fostering competencies such as critical thinking, problem-solving, innovation, leadership, digital literacy, environmental consciousness, and ethical reasoning. When students are empowered in these areas, they are more likely to become responsible citizens, environmentally conscious consumers, and proactive change-makers in their communities. This aligns with the United Nations' Sustainable Development Goal 4 (Quality Education), particularly Target 4.7, which emphasizes the need for learners to acquire the knowledge and skills needed to promote sustainable development, including education for sustainable lifestyles, human rights, gender equality, and global citizenship. However, the Nigerian educational system has been slow to adapt to the demands of the 21st century and the principles of sustainability. Traditional teaching methods that focus heavily on rote learning, examination success, and theoretical knowledge still dominate classrooms, while critical topics such as climate change, civic engagement, renewable energy, gender equity, peace building, and entrepreneurship are either underemphasized or completely absent from the curriculum. The disconnect between education and real-world challenges means that many students graduate from secondary school without the practical understanding or tools needed to contribute meaningfully to sustainable development goals.

Additionally, numerous structural and systemic challenges further hinder the empowerment of Nigerian secondary school students. These include inadequate teacher training on sustainability education, lack of access to learning resources and digital tools, poorly maintained school infrastructure, large class sizes, outdated curricula, and insufficient government investment in educational innovation. These challenges disproportionately affect students in rural and underserved communities, deepening the divide between different socioeconomic groups and limiting inclusive participation in national development efforts. Furthermore, social issues such as youth unemployment, insecurity, drug abuse, cultism, and political apathy remain prevalent among secondary school students and recent graduates underscoring the urgent need for value-based education that not only prepares students academically but also morally and socially. The rise of global crises such as climate change, pandemics, and technological disruption only reinforces the need for a generation of resilient, informed, and adaptable young people capable of thinking beyond immediate personal gain to long-term collective sustainability.

Owuamanam, and Okebukola, (2011). Education for sustainable development in the African context must take into account indigenous knowledge systems and the unique socio-economic and environmental realities of the continent. Sterling (2001) Sustainable education as a change of educational culture one which develops and embodies the theory and practice of sustainability in a way which is critically aware. It is education that prepares people to live and work in a sustainable way. Tilbury (2002) Education for sustainable development is about learning to think and act in a way that supports the long-term future of the economy, society and the environment. Fien (2002) emphasizes that Sustainable development in education should focus on critical thinking, interdisciplinary approaches, and participatory decision-making processes to solve complex sustainability problems. Hopkins and McKeown (2002) define Education for Sustainable Development as a process that allows every human being to acquire the knowledge, skills, attitudes, and values necessary to shape a sustainable future. Empowering secondary school students for sustainable development is, therefore, not just an educational goal it is a national imperative. The future of Nigeria's environmental health, economic competitiveness, and social cohesion depends on the values and capacities instilled in today's youth. As such, there is a compelling need to critically examine how the Nigerian secondary education system can be restructured and revitalized to serve as a foundation for empowering young people to become key stakeholders in sustainable development. This transformation requires the joint efforts of policymakers, educators, parents, communities, and students themselves to reimagine the purpose of education in an increasingly complex and interdependent world.

Statement Of The Problem

Nigeria faces multiple developmental challenges, including poverty, environmental degradation, youth unemployment, social inequality, and insecurity. Addressing these challenges requires a new generation of enlightened, responsible, and capable citizens who are not only knowledgeable but also committed to the principles of sustainability. Unfortunately, the current secondary school system in Nigeria often lacks the capacity, curriculum design, infrastructure, and pedagogical strategies necessary to empower students for active participation in sustainable development. The absence of structured programmes and content tailored to sustainability education limits students' understanding of global and national developmental issues and hinders their ability to contribute meaningfully to their resolution. Moreover, there is inadequate teacher training, poor integration of environmental and civic education, limited access to digital tools, and insufficient extracurricular initiatives that promote critical skills like leadership, innovation, entrepreneurship, and ecological awareness. This gap between educational outcomes and the demands of sustainable development poses a significant threat to Nigeria's future. If secondary school students are not empowered with the right tools and mindset, the vision of a sustainable, equitable, and prosperous Nigeria will remain unattainable. Thus, there is a pressing need to investigate and promote strategies that can effectively empower secondary school students to serve as active contributors to sustainable development in Nigeria.

Literature Review

Study Skills

Oladunmoye, Adegunle, Oyeniran and Yekinni (2023) the results revealed that study skill training had a significant effect on academic achievement in mathematics, and that gender moderated this effect. The study skill training group scored higher than the control group, and the female students in the study skill training group scored higher than the male students. The study recommended that school administration should incorporate study skill training in the curriculum, and that school counsellors should assist students in developing effective study skills. The study also suggested that parents should involve school counsellors in helping their children achieve their academic potential. Shahidi , Dowlatkhah, Abolghasem , Musavi and Mohammadi (2014) the results showed that the range of the students' study skills was 2.35, being rather below the normal level; the highest mean belonged to 'concentration' (2.56), but the lowest mean was that of 'time management' (2.05).Through ANOVA test, it was also shown that there was no significant difference between the students of Medicine, Nursing and Laboratory Sciences regarding their scores on 'study skills' as (p=0.646). In addition, through independent sample t-test, it was shown that there was no significant difference between the subjects' 'sex' and 'study skills' as the p-value was 0.584. On the other hand, through multiple regressions, the results indicated that there was a significant difference between 'taking exams' and 'studying' (p=0.003), between 'class note-taking' and ''taking exams' (p=0.004), between 'concentration' and ''taking exams' (p=0.002), and between 'time management' and 'taking exams' (p=0.001).

Tesfahun (2025) the analysis revealed that both study skill level and academic achievement have a statistically significant main effect on academic stress, with different levels of study skills and achievement being associated with varying levels of academic stress and a modest effect size. However, the interaction effect between study skill level and academic achievement in relation to perceived academic stress was not statistically significant. Post hoc tests indicated that students with low academic skills reported lower academic stress than did those with average academic skills did, and students with low academic achievement experienced greater academic stress than did their high-achieving counterparts did. The findings suggest important implications for educators, counselors and college students, emphasizing the need for targeted interventions to address study skills and achievement-related stress.

Afsaneh, Jafar, Mina, Shima, Kazem, Mohammad and Hossien (2011) the findings of the study showed that the study skills scores of university students with a grade point average (GPA) of 15 or more (out of 20), were statistically higher than that of those students with a GPA of less than 15 in all of the 7 skills of time management and procrastination (P<.01), concentration and memory (P<.01),

study aids and note taking (P<.02), test strategies and test anxiety (P<.01), organizing and processing information (P<.01), motivation and attitude (P<.04), and reading and selecting the main idea (P<.0001). Conclusion: Teaching of study skills to university students can play an important role in the improvement of students' academic performance. Mohamed (2023) findings revealed significant correlations between solid study skills and superior academic performance. Based on this, the study recommends: Study skills courses: Equipping students with time management, note-taking, and test preparation skills, along with specific accountancy study techniques. Early intervention: Integrating comprehensive study skills training into First Year, ideally as a dedicated course. Enhanced teaching: Encouraging lecturers to dedicate time to teaching effective study methods alongside accountancy concepts. Institutional support: Implementing a university-wide study skills program to offer ongoing support. By addressing the challenges and prioritising adequate study skills training, can significantly improve accountancy students' success and academic performance.

Critical Thinking

Zohre, Roohangiz, Faride, Mehrdad, Hayede and Zarrin (2014) findings indicated the significant difference of mean score in four learning style, suggesting university students with convergent learning style have better performance than other groups. Also learning style had a relationship with age, gender, field of study, semester and job. The results about the critical thinking of the students showed that the mean of deductive reasoning and evaluation skills were higher than that of other skills and analytical skills had the lowest mean and there was a positive significant relationship between the students' performance with inferential skill and the total score of critical thinking skills ($p<0.05$). Furthermore, evaluation skills and deductive reasoning had significant relationship. On the other hand, the mean total score of critical thinking had significant difference between different learning styles. Afifah & Nurbarirah (2017) findings have shown that their critical thinking ability ranged from low to moderate level. Thus, strategies of teaching and learning which stresses on student-centered learning must be adopted to stimulate student's thinking by encouraging critical and creative thinking and the construction of new knowledge. 61 students taking Diploma in Office Management and Technology were chosen as samples of this study. The data was collected through observation and classroom based activities namely debates, discussions, article analysis, problem-solving situations and case studies.

Zhang (2022) the research aims to investigate the college English teaching methods, approaches and strategies in English classes. The experiment was performed in the first semester from September 2021 to January 2022, with 64 students in Zhejiang Yuexiu University, China. There were thirty-two experimental participants and thirty-two traditional learning participants. All learners received the same content of learning, but through different methods of education. Students better demonstrated critical thinking in a post-strategy instruction assessment than those students who had not received any strategy instruction. The study used qualitative and quantitative methods that examined English teachers' awareness of critical thinking as a teachable skill. The data was collected through a questionnaire, observation and interview. Both college English teachers and students participated in this research. The results demonstrated that teachers accept that the critical thinking skills make the course more meaningful for learners. Teachers convinced that critical thinking should definitely be encouraged and it should become a habit in students. Sarwanto, Fajari & Chumdari. (2021) the study results indicated that the elementary school students' critical thinking skills were still be low due to several factors. These factors were originating mainly from the students and teachers themselves. The implication is that the school needs to pay more attention to strategies to improve and develop students' critical thinking skills in the future. The findings can be used as a reference point when considering the planning of effective strategies to improve the teaching and learning of critical thinking skills in elementary schools.

Rui, Yang & Stapleton (2020) the study revealed that the students' research engagement in various forms (e.g., workshop learning, individual and collaborative analysis, group consultation, presentations and critiquing) enhanced their CT skills (i.e., analysis, categorization, and interpretation) and CT dispositions (i.e., flexibility, adaptiveness, and open-mindedness). The students also actively

transferred the CT acquired in the project to their own disciplinary context, language teaching, which benefited their professional learning as future language teachers. The findings indicate that when designing and implementing courses, workshops, or projects aimed at enhancing students' CT, various dimensions need to be considered, including the degree of structured guidance, the collaborative arrangement, the integration of CT and content, as well as the students' motivation, learning styles and preferences. Van der Zanden, Denessen, Cillessen and Meijer (2020) the study investigated the way in which secondary education teachers think about and foster critical thinking skills to prepare their students for university. Semi-structured interviews with nine teachers showed that teachers do not have an unambiguous picture of critical thinking skills. Instead, teachers varied in their perceptions of the importance of critical thinking skills for university and in the practices they employ to foster these skills. It appears that teachers' perceptions and practices, firstly, depend on their images of university which are often based on their own study experiences, and secondly reflect the way they think about the cultivation of critical thinking skills and the transition to university. These results indicate that whether certain critical thinking skills are more or less encouraged in secondary education depends on the teacher.

Purpose Of The Study

The main purpose of this study was to investigate empowering secondary school students for sustainable development of education in Nigeria. Specifically the study sought to; determine if there is a relationship between study skills in empowering secondary school students for sustainable development find out whether there is a relationship between critical thinking and empowering secondary school students for sustainable development

Research Questions

To what extent does study skills relates with empowering secondary school students for sustainable development?

How does critical thinking relate with empowering secondary school students for sustainable development?

Research Hypotheses

There is no significant relationship of study skills on empowering secondary school students for sustainable development. Critical thinking does not significantly relate with empowering secondary school students for sustainable development

Methodology

Research Design This study adopted a descriptive survey research design. The choice of this design was informed by the study's aim to gather detailed information on the perception, practices, and impact of empowering secondary school students for sustainable development in Nigeria. Descriptive survey was particularly effective for obtaining current information about existing conditions and for identifying patterns or trends from a representative sample of the population. The target population consists of key stakeholders in the Nigerian education sector, including: Educational managers or administrators The study focused on selected public public secondary schools across six geopolitical zones in Nigeria to ensure regional balance and representativeness. Sample and Sampling Technique A multi-stage sampling technique was employed. In the first stage, three states were purposively selected from each geopolitical zone. In the second stage, institutions were randomly selected from the identified states. Stratified sampling was used to select respondents based on their roles and levels (secondary education). A total sample size of 180 respondents at30 per geopolitical zone was targeted to ensure sufficient data for analysis. Instrument for Data Collection The primary data collection instrument (questionnaire) was structured Empowering Secondary School Students for Sustainable Development in Nigeria (EMSSSFSDQ) complemented by administration to the participants by the researcher To ensure validity, the questionnaire was reviewed by experts in Test and Management department of the University of Calabar. A trial test involving 30 respondents from a non-sampled state was conducted to

refine the instrument. Reliability of the questionnaire was tested using Cronbach's Alpha, with a reliability coefficient of ≥ 0.80 considered acceptable. The data collection process involves trained research assistants who administered questionnaires physically and electronically (where applicable).with consent and transcribed for analysis. Data collection takes approximately 4–6 weeks across the selected regions. The study was adhered to strict ethical guidelines: Informed consent was obtained from all participants. Anonymity and confidentiality was maintained throughout the research process.

Results

Hypothesis One

There is no significant relationship of study skills on empowering secondary school students for sustainable development

Descriptive statistics and Pearson product moment correlation analysis was used to analyzed this hypothesis as presented in Table 1

Table One

Variables	N	$\bar{X}$	SD	DF	R	SIG
Study skills	180	16.09	2.829	178	1.00	259
Sustainable development	180	15.44	2.101	178	1.00	259

**Significant at .05 level

Based on the statistical evidence, the result on Table one above shows there is a strong positive relationship between study skills and sustainable development of secondary education in Nigeria (r = 1.00) which implies that there is perfect positive correlation of study skills and sustainable development of secondary education in Nigeria. And a strong correlation when the (calculated value = 259) in line with the available statistical proof on table as depicted. Therefore, the null hypothesis was rejected.

Hypothesis Two

Critical thinking does not significantly relate with empowering secondary school students for sustainable development

Descriptive statistics and Pearson product moment correlation analysis was used to analyzed this hypothesis as presented in Table 2

Table Two

Variables	N	$\bar{X}$	SD	DF	R	SIG
Critical thinking	180	15.07	2.334	178	1.00	231
Sustainable development	180	15.43	2.101	178	1.00	231

**Significant at .05

The statistical evidence provided on Table two above depicts a strong positive significant relationship between critical thinking on sustainable development of secondary education in Nigeria (r = 1.00) that implies a perfect positive correlation of the statistical result. However, there was a strong correlation when the (calculated value = 231) with the available statistical indication. Therefore, the null hypothesis was rejected.

Discussion Of Results

This study investigated Empowering Secondary School Students for Sustainable Development of Education in Nigeria. The result of the hypothesis one revealed that there was a strong statistical positive correlation between study skills and sustainable development of education in Nigeria. The implication of the findings revealed that there is perfect positive correlation of study skills on sustainable development of education in Nigeria. The result of the hypothesis is in view of Oladunmoye, Adegunle, Oyeniran and Yekinni (2023) the results revealed that study skill training had a significant effect on academic achievement in mathematics, and that gender moderated this effect. The study skill training group scored higher than the control group, and the female students in the study skill training group scored higher than the male students. The study recommended that school administration should incorporate study skill training in the curriculum, and that school counsellors should assist students in developing effective study skills. The study also suggested that parents should involve school counselors in helping their children achieve their academic potential

The findings also is in tandem with opinion of Tesfahun (2025) the analysis revealed that both study skill level and academic achievement have a statistically significant main effect on academic stress, with different levels of study skills and achievement being associated with varying levels of academic stress and a modest effect size. However, the interaction effect between study skill level and academic achievement in relation to perceived academic stress was not statistically significant. Post hoc tests indicated that students with low academic skills reported lower academic stress than did those with average academic skills did, and students with low academic achievement experienced greater academic stress than did their high-achieving counterparts did. The findings suggest important implications for educators, counselors and college students, emphasizing the need for targeted interventions to address study skills and achievement-related stress. The findings of this research hypothesis one however, is in agreement with the views of Mohamed (2023) findings revealed significant correlations between solid study skills and sustainable development. Based on this, the study recommends: Study skills courses: Equipping students with time management, note-taking, and test preparation skills, along with specific accountancy study techniques. Early intervention: Integrating comprehensive study skills training into First Year, ideally as a dedicated course. Enhanced teaching: Encouraging lecturers to dedicate time to teaching effective study methods alongside accountancy concepts. Institutional support: Implementing a university-wide study skills program to offer ongoing support. By addressing the challenges and prioritising adequate study skills training, can significantly improve accountancy students' success and sustainabl development.

This study investigated Empowering Secondary Schools Students for Sustainable Development of Education in Nigeria.. The result of the hypothesis two revealed that there was a strong statistical positive correlation between critical thinking and sustainable development of education in Nigeria. The implication of the findings revealed that there is perfect positive correlation of transparency on the values of sustainable development of education in Nigeria. The result of the hypothesis is in tandem with the study of Zohre , Roohangiz., Faride , Mehrdad , Hayede, and Zarrin (2014) findings indicated the significant difference of mean score in four learning style, suggesting university students with convergent learning style have better performance than other groups. Also learning style had a relationship with age, gender, field of study, semester and job. The results about the critical thinking of the students showed that the mean of deductive reasoning and evaluation skills were higher than that of other skills and analytical skills had the lowest mean and there was a positive significant relationship between the students' performance with inferential skill and the total score of critical thinking skills ($p<0.05$). Furthermore, evaluation skills and deductive reasoning had significant relationship. On the other hand, the mean total score of critical thinking had significant difference between different learning styles.

The findings of hypothesis two also agrees with the view of Van der Zanden, Denessen, Cillessen and Meijer (2020) the study investigated the way in which secondary education teachers think about and foster critical thinking skills to prepare their students for university. Semi-structured interviews with nine teachers showed that teachers do not have an unambiguous picture of critical thinking skills. Instead, teachers varied in their perceptions of the importance of critical thinking skills for university

and in the practices they employ to foster these skills. It appears that teachers' perceptions and practices, firstly, depend on their images of university which are often based on their own study experiences, and secondly reflect the way they think about the cultivation of critical thinking skills and the transition to university. These results indicate that whether certain critical thinking skills are more or less encouraged in secondary education depends on the teacher.

Conclusion

It was concluded from the result obtained based on the statistical evidence that both the hypotheses had a perfect significance correlation from the data analysis using SPSS to arrived at the informed decision of significant relationship that the null hypotheses were rejected.. It further therefore, implies that the result revealed a strong positive relationship of study skills and critical thinking as the sub variable of the independent variable has a strong significant relationship on the values of sustainable development of education in Nigeria as the dependent variable of the research topic.

Recommendations

The educational stakeholders should encourage the transformation of the school curriculum to activate students to rethinking and mobilize strategies to improve their study skills for excellence.
Teachers should intensify efforts to train students more on the area of critical thinking as a succinct area of investment for a better future development and sustainability.

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