

Integrating Agriculture into Primary Education Studies Program as a Compulsory Course for Academic Sustainability

Alaribe Mary Otitochukwu¹; Okafor Ndu Bibian²; Onipede Omoleye³; Amanze Peace Chimarauche⁴

^{1&4}*Alvan Ikoku Federal University of Education Owerri, Imo State, Nigeria*

²*Nnamdi Azikiwe University Awka, Anambra State, Nigeria*

³*Federal University of Kashere, Gombe State, Nigeria*

Abstract:

The declining interest in agriculture and environmental degradation in Nigeria, coupled with the need for sustainable academic development, necessitated this study. The purpose of this research is to explore the impact of integrating agriculture into primary education studies program as a compulsory course for academic sustainability. Vital issues discussed in this research include the importance of agriculture in primary education, the current state of agricultural education in Nigeria, and the potential benefits of making agriculture a compulsory course in primary education studies program. The researchers employed an analytical approach to discuss these issues in this research work. The findings indicated that integrating agriculture into primary education studies program would enhance students' academic performance in agriculture, improve the attitudes of graduate teachers towards teaching of agriculture particularly at primary school level, and also enhance environmental awareness of students towards farming and food production. Based on the findings, the researchers recommended that government, policymakers, educators, and other stakeholders should reintroduce agriculture as a compulsory course in primary education studies program in tertiary institutions, provide adequate resources and training for teachers, and promote agricultural education so as to ensure academic sustainability.

Keywords: *Agriculture, Primary education, Compulsory course, Sustainability, Environmental awareness*

1.0 Introduction

Integrating agriculture into primary education studies program as a compulsory course has gained significant attention in recent years. According to Newton (2024), incorporating agriculture into core subjects such as science, mathematics, and economics is essential to crafting a well-structured curriculum that prepares students for the challenges of the 21st century. By integrating agriculture into primary education, students can gain hands-on experience and practical skills that can enhance their understanding of concepts in agriculture and promote sustainable development. This approach can also help to address the declining interest in agriculture among young people and promote a positive image of agriculture as a viable career option.

Academic sustainability is a critical aspect of education, and integrating agriculture into primary education can play a significant role in achieving this goal. As Connolly (2024) notes, educating students on sustainable agriculture within the classroom offers a unique opportunity to cultivate a generation that understands the importance of environmental stewardship and are equipped with the knowledge and skills to promote sustainable development. By incorporating agriculture into primary education, a culture of sustainability can be promoted to equip students with the skills and knowledge in agriculture needed to address the environmental challenges facing Nigeria and the world. This can include learning about sustainable farming practices, conservation methods in farming, and environmental management, which can help to promote environmental awareness and stewardship among students.

The academic performance of students is also likely to be influenced by the integration of agriculture as a compulsory course into primary education studies program. Research suggests that hands-on learning experiences,

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such as those provided by agricultural education can enhance knowledge retention and promote teamwork and responsibility among students (Newton, 2024). By incorporating agriculture into primary education, students will be provided with opportunities to engage in experiential learning, develop problem-solving skills, and apply theoretical concepts to solving real-world problems in agriculture and beyond. This can lead to improved academic performance and more engaging learning experiences in agriculture for students.

Environmental awareness is another crucial aspect of integrating agriculture into primary education. By teaching students about sustainable farming practices and environmental stewardship, they can be empowered to become advocates for positive change in their communities and promote environmental sustainability (Connolly, 2024). As students learn about the interconnectedness of human and natural systems, they can develop a deeper appreciation for the natural world and a sense of responsibility to protect it through their wealth of knowledge and skills in agriculture. This can include learning about the impact of human activities on the environment, the importance of soil, water and nutrient conservation, and the role of agriculture in promoting environmental sustainability.

Students' attitudes towards farming and food production will as well be influenced by the integration of agriculture into primary education. As Asogwa (2022) notes, the removal of Agricultural Science as a compulsory subject has led to a decline in interest in agriculture among young people, highlighting the need to reinstate agriculture as a core subject in primary education. By incorporating agriculture into primary education, we can promote a positive image of agriculture and inspire students to pursue careers in agriculture and related fields. This can include learning about the importance of agriculture in promoting food security, the role of agriculture in the Nigerian economy, and the opportunities for entrepreneurship and innovation in agriculture.

Teachers' training is a critical factor in the successful integration of agriculture into primary education program. According to the National Agriculture in the Classroom Organization (n.d.), providing professional development opportunities for teachers is essential to ensure they are equipped to teach agricultural concepts effectively and promote student's learning. By investing in teachers' training, our nation can raise a cadre of educators who are confident and competent in teaching agriculture and promoting sustainable development. This can include training on sustainable farming practices, environmental education, and experiential learning approaches in agriculture.

Government policy and support are also crucial in promoting the integration of agriculture into primary education. As the Federal Ministry of Education (2020) notes, investing in agricultural education is essential to achieving food security and sustainable development. By developing policies and programs that support the integration of agriculture into primary education, the government can promote sustainable development, improve food security, and enhance the quality of education in Nigeria. This can include providing funding for agricultural education, developing curriculum guidelines that emphasize practical agriculture, and promoting partnerships between schools and agricultural organizations.

2.0 Agriculture

Agriculture is the backbone of Nigeria's economy, providing employment and income for millions of people. The sector contributes significantly to the country's Gross Domestic Product (GDP) and is a major source of foreign exchange earnings. Despite its importance, agriculture in Nigeria faces numerous challenges, including low productivity, inadequate infrastructure, and limited access to modern technology. To address these challenges, there is a need to transform the agricultural sector through innovative approaches, such as integrating agriculture into primary education as a compulsory course for students to study.

Integrating agriculture into primary education can help to promote a culture of sustainability and equip students with the skills and knowledge needed to address the environmental challenges facing Nigeria. By teaching students about sustainable farming practices, methods of conserving soil, and environmental management, they can be empowered to make positive changes in their communities and society as a whole. This approach can also help to promote environmental awareness and stewardship among students, which is essential for achieving sustainable development.

The integration of agriculture into primary education can also have a positive impact on the socio-economic development of Nigeria. By promoting agriculture as a viable career option, unemployment and poverty can be

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reduced among young people. Additionally, agriculture can provide opportunities for entrepreneurship and innovation, which can contribute to the country's economic growth and development. To achieve these benefits, there is a need for a comprehensive approach that involves government, private sectors, and civil society organizations working together to support agricultural education and promote sustainable agriculture practices.

3.0 Primary Education Studies Program

Primary Education Studies Program is a critical component of Nigeria's education system meant to train individuals on the subjects offered in Primary School to enable such individuals to competently and effectively teach those subjects to pupils in primary school on graduation. The program aims to develop the cognitive, affective, and psychomotor skills of teacher trainees, enabling them to become responsible citizens and contribute to national development. The curriculum is designed to be broad-based, incorporating courses on primary school subjects such as languages, mathematics, science, social studies, and vocational skills, including agriculture, as well as professional courses such as philosophy, psychology, and others. However, the implementation of the program faces challenges such as inadequate infrastructure, poorly trained teachers, and insufficient resources, which hinder the achievement of its objectives.

Effective primary education studies program is crucial for laying the foundation for lifelong learning and fostering sustainable development. The Primary Education Studies Program should prioritize equipping teacher trainees with essential skills such as literacy, numeracy, and problem-solving, as well as values like empathy, creativity, and environmental awareness. To achieve this, the program should incorporate innovative and interactive teaching approaches, such as project-based learning and experiential education, which enable teacher trainees to engage with real-world issues and develop abilities for practical solutions. Moreover, the program should prepare teacher trainees for community involvement, engagement and participation to create a supportive learning environment that reflects the needs and aspirations of local communities.

The Primary Education Studies Program has the potential to be a transformative force in Nigerian society, empowering future generations to drive economic growth, social progress, and environmental sustainability. To realize this potential, policymakers and educators must prioritize investments in teacher training, infrastructure development, and resource provision, ensuring that primary education studies program is well equipped to produce high-quality educators that will in turn meet the needs of pupils, particularly as it concerns the study of agriculture in primary school. By doing so, Nigeria can unlock the potential of its young people and build a prosperous, equitable, and sustainable future for all.

4.0 Academic Sustainability

Academic sustainability is a critical aspect of education, referring to the ability of educational institutions to maintain and improve their academic programs, research, and services over time. It involves creating a culture of excellence, innovation, and continuous improvement, where students, teachers, and staff are empowered to achieve their full potential. Academic sustainability is essential for ensuring that educational institutions remain relevant, effective, and responsive to the needs of students, communities, and the economy. It requires a long-term perspective, strategic planning, and a commitment to quality, accountability, and social responsibility.

Achieving academic sustainability requires a multifaceted approach that addresses various dimensions, including academic, financial, environmental, and social sustainability. Academic institutions must develop strategies to enhance teaching and learning, promote research and innovation, and foster partnerships with stakeholders. They must also manage their resources efficiently, reduce their environmental footprint, and promote social inclusion and diversity. Moreover, academic institutions must be adaptable and responsive to changing circumstances, such as technological advancements, demographic shifts, and economic trends, to remain relevant and competitive.

The pursuit of academic sustainability has far-reaching implications for individuals, communities, and societies. It can lead to improved learning outcomes, enhanced institutional reputation, and increased social mobility. It can also contribute to economic growth, poverty reduction, and environmental conservation. Furthermore, academic

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sustainability can foster a culture of lifelong learning, critical thinking, and civic engagement, enabling individuals to navigate complex challenges and make informed decisions. Ultimately, academic sustainability is essential for building a prosperous, equitable, and sustainable future, where education plays a transformative role in shaping the lives of individuals and societies.

5.0 Importance of Agriculture in Primary Education Studies Program

Agriculture is a vital component of primary education, providing students with hands-on experiences and practical skills that enhance their understanding of complex concepts and promote sustainable development. According to Pretty (2020), incorporating agriculture as a core subject such as science, mathematics, and economics is essential to crafting a well-structured curriculum that prepares students for the challenges of the 21st century. By integrating agriculture into primary education, students should be able gain a deeper understanding of the importance of sustainable agriculture, environmental conservation, and food security. This approach would also help to promote a culture of sustainability and equip students with the skills and knowledge needed to address environmental challenges facing Nigeria and the world.

Integrating agriculture into primary education studies as a compulsory course can help to sustain and equip students with the skills and knowledge needed to address environmental challenges. As Altieri (2022) notes, educating students on sustainable agriculture within the classroom offers an opportunity to cultivate a generation that understands the importance of environmental stewardship and are equipped with the knowledge and skills to promote sustainable development. By teaching students about sustainable farming practices, soil conservation, and environmental management, they will become better exposed to promote environmental sustainability and improve the agricultural life of their communities. This approach can also help to promote environmental awareness and stewardship among students, which is essential for achieving sustainable development.

The inclusion of agriculture in primary education studies program possibly would have a positive impact on students' attitudes towards farming and food production. Research suggests that hands-on learning experiences such as those provided by agricultural education can enhance knowledge retention and promote teamwork and responsibility among students (Fraser et al., 2019). By incorporating agriculture into primary education, a positive image of agriculture can be promoted, and this can also inspire students to pursue careers in agriculture and related fields. This should help to address the declining interest in agriculture among young people and promote a new generation of agricultural leaders, innovators, researchers, and entrepreneurs who can drive sustainable agricultural development and ensure food security.

Agricultural education is capable of equipping students with practical skills, such as crop management, animal husbandry, and farm mechanics, as well as essential life skills like problem-solving, critical thinking, and teamwork (Adeyemi, 2018). Moreover, agricultural education can foster a new generation of agricultural leaders, innovators, researchers, technocrats, and entrepreneurs who can drive sustainable agricultural development and ensure food security. By incorporating agriculture into primary education, a culture of innovation and entrepreneurship will be promoted to equip students with the skills and knowledge needed to address the challenges facing the agricultural sector.

The integration of agriculture into primary education studies program is crucial for building a sustainable food system, promoting rural development, and ensuring a food-secure future for generations to come. According to the Food and Agriculture Organization (FAO, 2020), the provision of professional development opportunities for teachers is essential to ensure they are equipped to teach agricultural concepts effectively and promote students' learning. By investing in agricultural education, a nation can promote a sustainable development of her economy, improve food security, and enhance the quality of education of her citizenry.

6.0 The Current State of Agricultural Education in Nigeria

The current state of agricultural education in Nigeria is a topic of great concern, as it plays a critical role in shaping the future of the country's agricultural sector. Agricultural education in Nigeria has been facing numerous challenges, including inadequate funding, poor infrastructure, and a lack of qualified teachers. Many agricultural

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education institutions in the country are struggling to provide students with the practical skills and knowledge needed to succeed in the agricultural industry. The curriculum is often outdated and does not reflect the current needs of the sector, resulting in graduates who are not adequately prepared for the workforce.

The lack of emphasis on agricultural education in Nigeria's educational system has led to a decline in the number of students pursuing careers in agriculture. Many students view agriculture as a low-status profession and prefer to pursue careers in other fields. This has resulted in a shortage of skilled workers in the agricultural sector, which has hindered the country's efforts to achieve food security and sustainable agricultural development. To address this challenge, the government needs to prioritize agricultural education and provide adequate funding to support the development of agricultural education institutions.

Agricultural education in Nigeria is also facing challenges related to the lack of practical training and industry exposure. Many agricultural education institutions in the country focus mainly on theoretical knowledge, with little or no commitments to practical skills and hands-on training. This has resulted in graduates who are not adequately prepared for the workforce and lack the skills needed to succeed in the agricultural industry. To address this challenge, agricultural education institutions need to incorporate realistic practical training and industry exposure into their programs, including internships, apprenticeships, and industry-based projects.

The integration of technology into agricultural education is also an area that requires attention in Nigeria. The use of technology such as improved farming methods, high yielding seeds and livestock breeds, among others in agriculture has the potential to improve productivity, efficiency, and sustainability, but many agricultural education institutions in the country lack the resources and expertise to incorporate technology into their programs. This has resulted in turn outs of graduates who are not adequately prepared to work in a rapidly changing agricultural industry. To address this challenge, the government needs to invest in technology infrastructure and provide training and support to teachers to incorporate technology into agricultural education.

The future of agricultural education in Nigeria depends on the ability of the government, educators, researchers and industry stakeholders to work together to address the challenges facing the sector. This requires a coordinated approach that prioritizes investments in agricultural education, provides support to agricultural education institutions, and promotes industry-accredited programs. By working together, Nigeria can develop a robust agricultural education system that produces graduates who are equipped with the skills and knowledge needed to drive sustainable agricultural development and achieve food security.

7.0 Potential Benefits of Making Agriculture a Compulsory Course in Primary Education Studies Program

Making agriculture a compulsory course in primary education studies can significantly improve food security in Nigeria by equipping students (teacher trainees) with the knowledge and skills needed to produce their own food. According to Akinbile (2022), integrating agriculture into primary education can increase food production, reduce poverty, and improve nutrition among school-aged children. This is particularly important in Nigeria, where food insecurity is a major challenge, with millions of people suffering from hunger and malnutrition. By teaching students about sustainable agricultural practices, such as crop rotation, composting, and irrigation, they get empowered to become food producers and contributors to the country's food security.

Agriculture can play a crucial role in promoting environmental awareness and sustainability among learners. According to Fraser (2019), integrating agriculture into primary education can increase students' knowledge and awareness of environmental issues, such as climate change, deforestation, and soil erosion. This is essential in Nigeria, where environmental degradation is a major challenge, with widespread deforestation, pollution, and loss of biodiversity. By teaching students about sustainable agricultural practices and environmental conservation, a culture of sustainability is promoted, and this encourages students to adopt environment-friendly practices.

Practical agriculture can improve academic performance among learners by providing hands-on learning experiences and promoting critical thinking and problem-solving skills. According to Fraser (2019), students who participate in practical agricultural education programs tend to perform better in other subjects, such as science and mathematics. This is because agriculture provides a practical and engaging way of learning, which can help learners to understand complex concepts and principles for practical applications for solution of real life problems. By

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integrating agriculture into primary education, there will be a more holistic and integrated approach to learning, which can improve academic performance and learning outcomes.

Agriculture can equip students with entrepreneurial skills, such as business planning, marketing, and management, which can help them start their own agricultural businesses. According to Adekunle (2021), integrating agriculture into primary education can promote entrepreneurship and job creation among young people. This is particularly important in Nigeria, where unemployment is a major challenge, with millions of young people struggling to find jobs. By engaging students on agricultural entrepreneurship, they can be empowered to become job creators and contributors to the country's economic development.

Agriculture can help preserve Nigerian culture and traditions by promoting the importance of indigenous crops, farming practices, and food systems. According to Okigbo (2022), integrating agriculture into primary education can promote cultural diversity and preserve traditional farming practices. This is essential in Nigeria, where cultural heritage is an important part of national identity.

8.0 Conclusion and Recommendations

In conclusion, making agriculture a compulsory course in primary education studies program in Nigeria can have numerous benefits, ranging from improved food security to cultural preservation. Integration of agriculture into primary education studies program will help to equip students (teacher trainees) with the knowledge and skills needed to: improve their academic performance in agriculture, produce their own food, teach agriculture effectively to pupils in primary school on graduation (if employed to teach), and as well promote environmental awareness and sustainability. These can have positive impacts on the country's food security, environmental conservation, and economic development.

Furthermore, incorporating agriculture into primary education can also promote entrepreneurship and job creation among young people. By teaching students about agricultural entrepreneurship, they can on graduation become job creators and contributors to the country's economic development. This can as well help address the high unemployment rate among young people in Nigeria and promote economic growth.

In summary, making agriculture a compulsory course in primary education studies program is a step in the right direction towards achieving sustainable development in Nigeria. It will enhance teaching and learning of agriculture in primary school as the graduate teachers of primary education program will be well trained to expose pupils to agriculture in the primary school, promote food security, environmental awareness, academic performance, entrepreneurship, and cultural preservation.

Based on the findings, it is recommended by the researchers that government, policymakers, educators, and other relevant stakeholders should reintroduce agriculture as a compulsory course in primary education studies program in tertiary institutions, provide adequate resources and training for teachers, and promote agricultural education so as to ensure academic sustainability.

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