

**INFLUENCE OF PRACTICAL AGRICULTURAL SCIENCE ACTIVITIES ON
ACADEMIC PERFORMANCE OF PUBLIC SECONDARY SCHOOL STUDENTS IN
IKPOBA-OKHA LOCAL GOVERNMENT OF EDO STATE**

AKOGUN ANITA ONUS

UNIVERSITY OF BENIN

MAY, 2026.

**INFLUENCE OF PRACTICAL AGRICULTURAL ACTIVITIES ON ACADEMIC
PERFORMANCE OF PUBLIC SECONDARY SCHOOL STUDENTS IN
IKPOBA-OKHA LOCAL GOVERNMENT OF EDO STATE**

**AKOGUN ANITA ONUS
PG/IED2415382**

**A RESEARCH PROJECT WRITTEN IN THE INSTITUTE OF EDUCATION AND
SUBMITTED TO THE SCHOOL OF POST GRADUATE STUDIES, UNIVERSITY OF
BENIN, BENIN CITY, IN PARTIAL FULFILLMENT FOR THE AWARD OF A POST
GRADUATE DIPLOMA IN EDUCATION (PGDE)**

MAY, 2026.

CERTIFICATION

This is to certify that this research work was carried out by Akogun Anita Onus within the Institute of Education under the supervision of the undersigned

Dr. (Mrs.) M.P. ALBINUOMO
Project Supervisor

Date

Prof. (Mrs.) R.O. OLUBOR

Date

Dr. K. Imasuen
Director, Institute of Education

Date

DEDICATION

This research work is dedicated to my husband, Mr. Samuel Akogun for his contribution towards the success of this work.

ACKNOWLEDGEMENTS

I would like to express my deepest and sincere gratitude to God for his faithfulness, mercy, grace, provision and protection in my life.

My special appreciation goes to my ever supportive project supervisor, Dr. (Mrs.) M.P. Albinuomo who patiently and diligently guided me so that I can do my best

I also want to appreciate all the lecturers in the institute of Education; Dr. Kennedy Imasuen (Institute Director), Prof. (Mrs.) Olubor O. Roseline, Prof. Aluko Kehinde, Prof. (Mrs.) Ojeme I. Agatha, Dr. (Mrs.) Iyamu I. Florence, Dr. Uwadiae C. Wesley, Dr. Philip Isabor and Dr. (Mrs.) T.U. Irimoren for their help and encouragement throughout this programme.

My appreciation also goes to my husband, Mr. Samuel Akogun and his elder brother Mr. Peter Akogun for their financial support throughout this programme. I also appreciate my mother Mrs. R. Okoebor for her motherly role for the success of my academics. My appreciation also goes to my siblings; Mr. Johnbull Imoudu, Mr. Kola Afuwape, Mrs. Sandra Enaohwo, Mrs. Mary Osagie, Mrs. Helen Imangbe and my late brother, Mr. Osi, for their sweet words of encouragement.

TABLE OF CONTENTS

	PAGE
TITLE	I
DECLARATION	II
CERTIFICATION	III
DEDICATION	IV
ACKNOWLEDGEMENTS	V
ABSTRACT	VI
CHAPTER ONE: INTRODUCTION	
Background to the Study	1
Statement of Problem	4
Research Questions	6
Hypothesis	6
Purpose of the Study	6
Significance of the Study	7
Scope and Delimitation of the Study	8
Definition of Terms	8
CHAPTER TWO: REVIEW OF RELATED LITERATURE	
Theoretical Framework	9
Concept of Agricultural Science	12
Concept of Academic Performance of Students	15
Influence of Practical Agricultural Activities on Students' Academic Performance	17
Influence of Practical Agricultural Activities on Students' Academic	

Performance Based on Gender	20
Influence of Practical Agricultural Activities on Students' Academic	
Performance Based on School Location	22
Challenges Affecting Practical Agricultural Activities	24
Strategies to Enhance Practical Agricultural Learning	27
Summary of Literature Reviewed	32

CHAPTER THREE: RESEARCH METHODOLOGY

Research Design	34
Population of the Study	34
Sample and Sampling Techniques	34
Research Instruments	35
Validity of the Instrument	35
Reliability of the Instrument	35
Method of Data Collection	36
Method of Data Analysis	36

CHAPTER FOUR: PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

Presentation of Results	37
Discussion of Findings	41

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary	45
Conclusion	47

Recommendations	48
Contributions to knowledge	49
Suggestions for further research	50
REFERENCES	52
APPENDIX - QUESTIONNAIRE	54

ABSTRACT

This study examined the influence of practical Agricultural science activities on academic performance of public secondary school students of Ikpoba-Okha Local Government of Edo State. Five research questions guided this study, three questions were answered and two questions were hypothesized, the population of this study consist of 250 senior public secondary school students, the samples of this study was 20% of the total population which have a sample of 50students, pearson(r) was used to determine the level of reliability ,the instrument for data collection was questionnaire validated by the supervisor and other lecturers in the institute of Education, the reliability of the instrument was tested at 0.05 alpha level of significance using test retest method and a correlation coefficient of 0.90 was obtained. The data collected was inputted into the computer and analyzed using SPSS: mean and standard deviation. The study found out that practical agricultural science activities has influence on academic performance on public secondary school students, based on the findings, it was recommended that schools should design balanced timetable that allocate adequate time for both practical agricultural activities and academic subjects to prevent interference with student's study.

CHAPTER ONE

INTRODUCTION

Background to the Study

Agriculture remains one of the most important sectors of the Nigerian economy, providing food, employment, and raw materials for industries. As the global population continues to grow, the need for skilled agricultural practitioners who can apply modern techniques in farming is increasingly vital. Education, particularly at the secondary school level, plays a key role in equipping young people with the knowledge and practical skills necessary for sustainable agricultural development.

In Nigeria, Agricultural Science is taught in secondary schools not only to impart theoretical knowledge but also to develop practical competencies through activities such as crop cultivation, animal husbandry, soil preparation, and farm management. However, in many public secondary schools, particularly in areas such as Ikpoba Okha Local Government Area of Edo State, there is growing concern that practical agricultural activities are not adequately emphasized. Factors such as insufficient resources, lack of trained personnel, inadequate farm tools, and poor maintenance of school farms often hinder effective practical learning (Food and Agricultural Organization (FAO) 2018).

Practical agricultural activities are essential in bridging the gap between classroom knowledge and real-world application. When students actively participate in farming activities, they are better able to understand agricultural concepts, retain information, and apply skills beyond the school environment. This, in turn, can positively influence their academic performance in Agricultural Science.

The inclusion of practical agricultural activities in schools is aimed at stimulating students' interest in agriculture, enhancing their psychomotor skills, and improving their overall academic performance.

In recent years, there has been growing concern over students' declining interest and performance in Agricultural Science, especially in public secondary schools within Ikpoba Okha Local Government Area of Edo State. Despite the introduction of school farms, agricultural demonstration plots, and various hands-on projects, many students still perceive the subject as difficult or less relevant to their future aspirations. This situation raises questions about whether the intended goals of incorporating practical agricultural activities are being achieved in improving students' learning outcomes (Adekunle & Aina, 2012).

The scholars like Onwumere, M. et al. (2016) emphasized that practical engagement in agricultural activities can help bridge the gap between theory and practice, thereby enhancing cognitive understanding and fostering better academic performance. However, in some schools, practical sessions are either irregularly conducted or inadequately supported by facilities, funding, and teacher supervision. This uneven implementation brings about the need to examine the influence of agricultural science activities in secondary schools in Ikpoba Okha Local Government Area, determining whether such activities truly make a difference in students' learning experience and performance (Federal Ministry of Education, 2014).

Furthermore, it becomes essential to assess the influence of agricultural science activities on students' academic performance, considering that active participation in practicals could lead to deeper understanding and retention of agricultural concepts. Similarly, the study seeks

to investigate the extent to which practical agricultural activities influence students' academic performance, distinguishing between mere exposure to practicals and their actual impact on achievement levels.

In addition, there is a growing need to understand whether such influence varies among different groups of students. Hence, the study explores the extent to which agricultural activities influence students' academic performance based on gender, recognizing that boys and girls may differ in participation levels, interests, and outcomes in agricultural practice. Likewise, school location may also play a role in determining exposure and access to agricultural resources; therefore, the study examines the extent to which agricultural activities influence students' academic performance based on school location, comparing urban and rural schools in Ikpoba Okha Local Government Area.

However, when such practical components are neglected, students may struggle with understanding core concepts, leading to lower performance in the subject.

In Ikpoba Okha, where agriculture plays a significant role in the local economy, secondary school students stand to benefit greatly from a robust agricultural education program that integrates practical experience. Understanding the relationship between practical agricultural activities and students' academic performance is crucial in improving teaching methods, policy formulation, and resource allocation for public secondary schools in the area.

The extent to which practical agricultural activities influence the academic performance of students seeks to determine the overall impact that hands-on agricultural experiences have on how well students perform in Agricultural Science. It examines whether activities such as

land preparation, planting, weeding, harvesting, livestock care, and farm tool management actually enhance students' understanding of theoretical concepts. Understanding this influence is important because it helps to clarify whether practical learning contributes significantly to better grades, deeper comprehension, improved retention, and greater student motivation toward the subject (Osinem & Nwoji, 2010).

The academic performance of students based on gender shows whether male and female students benefit equally from participation in agricultural practical activities. It explores the possibility of gender differences in interest, skill acquisition, confidence level, and performance outcomes in Agricultural Science. Gender-based analysis is crucial because cultural factors, societal expectations, physical involvement in tasks, and attitudes toward farming can vary between boys and girls. By examining performance differences, the study aims to determine whether practical activities favor one gender over the other or whether both experience similar academic gains.

School location can influence the availability of farmland, access to tools, teacher experience, exposure to agricultural practices, and overall interest in the subject. Rural schools are often assumed to have more land and farming culture, while urban schools may have limited space but better resources or technology.

Statement of the Problem

Despite the inclusion of Agricultural Science as a core subject in the Nigerian secondary school curriculum, students' academic performance in the subject has remained generally low across many schools in Ikpoba Okha Local Government Area. Although the curriculum emphasizes practical agricultural activities as a means of enhancing understanding and skill

development, many schools still rely heavily on theoretical classroom teaching with minimal engagement in hands-on farm work. As a result, students often struggle to relate theoretical concepts to real-life agricultural practices, leading to poor comprehension, low interest, and declining performance in examinations.

There are growing concerns that the influence of practical agricultural activities on students' academic achievement may not be uniform across different categories of learners. Differences in gender roles, cultural expectations, and levels of participation may cause male and female students to benefit differently from agricultural practicals. In the same vein, variations in school location particularly between urban and rural schools, may determine the availability of farmland, farm tools, teacher expertise, and exposure to agricultural projects, thereby affecting students' performance outcomes.

The precise problem, therefore, is that it remains unclear to what extent practical agricultural activities actually contribute to improved academic performance in Agricultural Science, and whether this influence differs based on gender and school location. This gap in empirical evidence makes it difficult for educators and policymakers to strengthen practical components of the curriculum or design interventions that address disparities across student groups. Consequently, there is an urgent need to investigate how practical agricultural activities impact students' academic performance in Agricultural Science in Ikpoba OkhaLGA, and to determine whether gender and school location play significant moderating roles.

Research Questions

To guide this study, the following research questions were raised:

1. What is the influence of agricultural science activities on academic performance of students?
2. To what extent does practical agricultural activities influences academic performance of students?
3. To what extent does agricultural activities influences academic performance of students based on gender?
4. To what extent does agricultural activities influences academic performance of students based on school location?
5. What are the recommendations for improving practical Agricultural activities in secondary schools?

Hypothesis

Research questions 1 and 2 were answered while research questions 3 and 4 were hypothesized and tested at 0.05 alpha level of significance

1. There is no significant difference in the extent agricultural activities influences academic performance based on students gender
2. There is no significant difference in the extent agricultural activities influences academic performance based on students location.

Purpose of the Study

The main purpose of this study is to examine the impact of practical agricultural activities on students' academic performance in Agricultural Science in public secondary

schools in Ikpoba Okha Local Government Area of Edo State.

Specifically, the objectives were:

- To determine the extent to which practical agricultural activities are implemented in public secondary schools.
- To assess the influence of practical agricultural activities on students' academic performance.
- To investigate the relationship between participation in practical agricultural science activities and students' academic performance.
- To identify the challenges faced by public secondary schools in implementing practical agricultural activities.
- To suggest strategies for improving the effectiveness of practical agricultural activities in enhancing students' performance.

Significance of the Study

This study is significant because it will provide valuable insights into the role of practical agricultural activities in enhancing students' academic performance in Agricultural Science in public secondary schools. It will help the students to appreciate the value of engaging in hands-on agricultural activities for improved understanding and skills.

It will guide the teachers to adopt more effective teaching strategies that integrate practical learning. It will assist the school administrators in decision-making regarding investment in school farms and agricultural resources.

It will provide the curriculum planners the evidence for curriculum improvements that emphasize practical agriculture. It will guide policy makers and funding towards improving

agricultural education in public schools.

It will serve as a reference for point to other researchers who want to carry out the same research work from another LGA.

Scope and Delimitation of the Study

The scope of the study is on the influence of agricultural science activities on academic performance of students in public secondary school in Ikpoba Okha Local Government Area and it is delimited to public secondary schools in Ikpoba Okha Local Government Area.

Definition of Terms

Agricultural Science: The study of farming practices, including crop and animal production, soil management, and agricultural tools.

Practical Agricultural Activities: Hands-on farming tasks such as planting, weeding, harvesting, and animal rearing carried out as part of agricultural education.

Academic Performance: The measure of a student's achievement in a subject, usually based on test scores, assignments, and assessments.

School Location: refers to the geographical setting or environment in which a school is situated, often classified as urban, semi-urban, or rural.

Gender: the social and cultural distinctions, roles, and expectations associated with being male or female in a given society.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviews the literature under the following sub-headings:

- Theoretical Framework
- Concept of Agricultural Science
- Concept of Academic Performance
- Influence of Practical Agricultural Activities on Students' Academic Performance
- Influence of Practical Agricultural Activities on Students' Academic Performance based on gender
- Influence of Practical Agricultural Activities on Students' Academic Performance based on school location
- Challenges Affecting Practical Agricultural Activities
- Strategies to Enhance Practical Agricultural Learning
- Summary of Literature Reviewed

Theoretical Framework

This study adopted Experiential Learning Theory which was propounded by David Kolb in 1984, and Constructivist Learning Theory (Piaget, 1973; Vygotsky, 1978)

Experimental theory emphasizes the theory emphasized that learners construct knowledge through direct experience. The theory proposes that effective learning occurs when individuals engage in a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation. Kolb explains learning as a continuous process grounded in experience rather than a static outcome. According to ELT, students learn

best when they are actively involved in tasks that require them to apply theoretical knowledge in realistic contexts.

In the context of Agricultural Science, experiential learning is indispensable because the subject is inherently practical. Agricultural concepts such as soil science, crop production, livestock management, and tool maintenance cannot be fully understood through theory alone. Practical agricultural activities, such as land preparation, planting, harvesting, and caring for animals, allow students to gain concrete experience, which forms the first stage in Kolb's learning cycle.

During reflective observation, students think about the activities they engaged in, observe the outcomes of their actions, and identify what worked well or what needs improvement. This reflection helps them develop deeper understanding and supports the next stage: abstract conceptualization, where students internalize observations and form general principles or theories based on what they experienced. Finally, in the active experimentation stage, students apply what they have learned to new tasks, refining skills and improving performance.

Practical agricultural activities therefore align perfectly with Kolb's model because they:

- Provide learners with first-hand experience in real agricultural tasks.
- Encourage reflection on successes and challenges encountered on the school farm.
- Help students connect classroom theories with real-life agricultural operations.
- Allow students to experiment continuously, which strengthens their skill development.

Kolb's theory underscores why students often perform better academically when exposed

to practical work. Practical activities promote higher retention of knowledge, improve understanding of abstract agricultural concepts, and boost students' confidence in applying learned skills. Moreover, experiential learning fosters problem-solving, innovation, and critical thinking, core competencies that are essential for agricultural careers.

Constructivist Learning Theory posits that learners actively construct knowledge rather than passively receive it. According to Piaget and Vygotsky, learning is an interactive process where individuals build new understanding based on their experiences, interactions, and existing knowledge structures.

Jean Piaget's cognitive constructivism emphasizes that learners progress through stages of cognitive development, and meaningful learning occurs when they actively manipulate objects, engage in problem-solving, and explore their environment. This makes practical agricultural work highly suitable for promoting learning because it provides students with opportunities to interact with plants, animals, tools, and natural resources, all of which stimulate cognitive development.

Lev Vygotsky's social constructivism expands on this by emphasizing the role of social interaction, collaboration, and guidance in learning. His concept of the Zone of Proximal Development (ZPD) suggests that learners can achieve higher levels of understanding with support from teachers or more knowledgeable peers. In the context of practical agriculture, teachers act as facilitators who guide students through hands-on tasks, demonstrate farming techniques, and provide scaffolding that helps students perform activities they might not accomplish independently.

Constructivist theory therefore supports practical agricultural activities because these

activities:

- Allow students to build knowledge through direct engagement with natural processes.
- Encourage cooperative learning as students work together on school farms.
- Promote inquiry-based learning where students ask questions, investigate problems, and seek solutions.
- Help learners construct meaningful connections between theoretical concepts and real-world agricultural practices.

In addition, constructivism highlights the importance of the learning environment. A well-organized school farm becomes a rich learning space that stimulates curiosity and supports cognitive growth. The interactive nature of agricultural work aligns with the constructivist view that knowledge is not transmitted but constructed through experience, reflection, and collaboration. The relevance of this theories to the study was that justification for integrating practical agricultural activities into the teaching of Agricultural Science. They explain why students who participate actively in farm work tend to demonstrate higher academic performance, improved retention, and better problem-solving skills compared to those who learn only through theoretical instruction.

Concept of Agricultural Science

Agricultural Science as a subject within the Nigerian secondary school system occupies a strategic position in national development and educational planning. The Federal Republic of Nigeria (2014) emphasizes the importance of agricultural education as part of its effort to promote self-reliance, food production, and technological advancement among young citizens. At the secondary level, Agricultural Science is designed as an applied science, integrating

concepts from biology, chemistry, ecology, economics, and environmental studies. Its multidisciplinary nature enables learners to understand the biological, environmental, and socio-economic dimensions of agriculture.

The overarching purpose of teaching Agricultural Science in secondary schools is to equip students with essential knowledge, develop practical competencies, and promote attitudes necessary for productive involvement in agriculture. It introduces students to various fields including crop production, animal husbandry, soil science, agricultural mechanization, farm management, and agro-processing. Through its curriculum, students gain foundational understanding of modern farming systems, sustainable practices, and technological innovations shaping agricultural development.

Furthermore, Agricultural Science provides opportunities for learners to appreciate the relevance of agriculture to national development, employment creation, and environmental sustainability. It aims to stimulate interest in agricultural careers and equip learners with entrepreneurial skills that can contribute to agribusiness ventures. In rural communities, the subject is especially important as it helps students understand improved farming techniques that can be applied within their local contexts. Thus, Agricultural Science serves both educational and socio-economic functions, making it integral to national aspirations for food security and economic diversification.

However, the effectiveness of Agricultural Science as a subject depends significantly on the extent to which students are exposed to practical experiences. Without practical activities, the subject risks becoming abstract and disconnected from the realities of agricultural production. Therefore, the conceptualization of Agricultural Science in secondary schools

must emphasize the interplay between theory and practice.

Practical Agricultural Activities

Practical agricultural activities refer to structured hands-on tasks that allow students to apply classroom knowledge to real agricultural operations. These activities take place on school farms, demonstration plots, laboratories, greenhouses, orchards, fish ponds, and livestock units. As Akinbode (2019) noted, practical agricultural tasks include land preparation, seed selection, planting, weeding, pruning, fertilizer application, pest and disease control, harvesting, storage, animal feeding, record keeping, and maintenance of farm tools. The purpose of practical activities is to provide experiential learning opportunities that deepen students' understanding of agricultural processes. These tasks develop students' psychomotor skills, build confidence in handling tools, and promote logical thinking as students observe how theoretical concepts manifest in real situations. For instance, lessons on soil structure become clearer through activities like soil texturing, compost preparation, and mulching, while concepts in animal nutrition are better understood when students formulate simple feed rations.

Practical activities also instill discipline, responsibility, teamwork, and problem-solving skills as students engage in real-life challenges such as managing pests, monitoring crop growth, or responding to unpredictable weather conditions. In addition, these activities help students appreciate the economic aspects of agriculture, especially when engaged in school-based enterprise projects such as vegetable gardens, poultry production, or fish farming.

Beyond academic benefits, practical agricultural activities expose students to

entrepreneurial opportunities across the agricultural value chain. Through hands-on engagement, learners discover niches such as horticulture, livestock management, agro-processing, farm mechanization, and digital agriculture. This exposure broadens career perspectives and supports the national objective of encouraging youth participation in agriculture.

Concept of Academic Performance of Students

Student academic performance refers to the extent of which learners successfully achieve the educational goals and learning outcomes set for a particular subject or level of education. It is a measure of students' knowledge, understanding, skills and attitudes acquired through teaching and learning processes. Academic performance is commonly evaluated through examinations, tests, assignments, practical assessments, projects and continuous assessment records.

According to Okorie and Eze (2018), academic performance reflects the degree to which a student has mastered subject content and is able to apply learning knowledge to solve problems. In the context of secondary school education, academic performance serves as an important indicator of instructional effectiveness, curriculum implementation and students' readiness for higher education or vocational pursuit.

Academic performance is often expressed in terms of grades, scores, or overall results in a particular subject or across subjects. It serves as an indicator of students' learning outcomes and the effectiveness of teaching methods.

Academic performance is not limited to theoretical knowledge alone; it also includes

practical skills, especially in subjects like Agricultural Science where hands-on activities are essential. Therefore, a student who performs well is one who demonstrates both intellectual understanding and the ability to apply knowledge in real-life situations.

Several factors influence students' academic performance. These include students' interest, motivation, study habits, intelligence, and attitude towards learning. External factors such as teaching methods, availability of instructional materials, school environment, and parental support also play a significant role.

Academic performance helps in evaluating the success of educational programs and guiding decisions on curriculum development and teaching strategies. High academic performance indicates effective learning, while poor performance may suggest the need for improvement in teaching methods or learning conditions.

In Agriculture science, student academic performance goes beyond success in written examinations, it encompasses cognitive, psychomotor and effective domain of learning. The cognitive domain relates to students' understanding of agricultural concepts such as soil science, crop production, animal husbandry and farm management. The psychomotor domains involves the acquisition of practical skills including planting, weeding, grafting, animal handling and the use of farm tools. The effective domain focuses on students' attitudes, interests, values, and appreciation of agriculture as a viable career path.

Several factors influence students' academic performance in agricultural science. These include teaching methods, availability of instructional materials, teacher competence, students' interest and motivation, learning environment and the level of exposure to practical agricultural activities. Studies have shown that students perform better academically when

teaching emphasizes learner-centered and activity-based approaches rather than reliance on theoretical instruction alone.

Practical agricultural activities play a significant role in enhancing academic performance because they help students relate theoretical knowledge to real-life agricultural situations. When students actively participate in school farm operations, they develop deeper understanding, retain information longer and demonstrate improved performance in both internal and external examinations. Practical exposure also promotes problem-solving skills, critical thinking and self-confidence, which positively influences academic achievement.

Furthermore, student academic performance is an important determinant of educational and career outcomes. High performance in Agricultural Science has increases students' chances of pursuing agricultural-related courses and careers, thereby contributing to national goals of food security, employment creation and sustainable development. Consequently, improving students' academic performance in agricultural science requires deliberate efforts to strengthen practical instruction, provide adequate learning resources and create supportive learning environment.

Influence of Practical Agricultural Activities on Students' Academic Performance

Several empirical studies have established a strong relationship between students' involvement in practical agricultural activities and their academic performance in agricultural science. Practical engagement enables learners to transform abstract classroom knowledge into concrete understanding, thereby improving comprehension, retention and examination performance.

Akinbode (2019) reported that students who participated in school farm activities such as

crop cultivation, livestock rearing and record keeping achieved significantly higher scores in Agricultural Science examination than students exposed mainly to theoretical instruction. The study attributed this improvement to the hands-on nature of practical activities, which enhances students' understanding of agricultural concepts and strengthens their ability to recall information during examinations.

Similarly, Adeyemi and Oluwafemi (2020), in a quasi-experimental study, found that students taught using practical-based instruction strategies performed better academically than those taught through lecture methods alone. The researchers explained that practical activities stimulate students' interest, encourage critical thinking and promote active learning, all of which contribute to improved academic outcomes.

Asiegbu & Ugwoke (2017) also observed that students exposed to continuous practical agricultural work demonstrated better long-term retention of knowledge and improved problem-solving abilities. According to the study, learners who engage in real-life farming activities such as soil preparation, planting, and pest control were able to apply learned concepts more effectively during assessments.

Okorie and Eze (2018) emphasized that agricultural activities enhance students' psychomotor and effective learning outcomes, which complement cognitive achievement. Students do not only understand concepts better but also develop confidence, discipline and positive attitudes towards agricultural science, leading to improved overall academic performance.

Practical agricultural activities play a crucial role in enhancing students' academic

performance, especially in a subject like Agricultural Science which is skill-oriented and application-based. These activities involve hands-on experiences such as crop cultivation, animal rearing, soil testing, and the use of farm tools and equipment.

One major influence of practical agricultural activities is that they improve students' understanding of concepts. When students actively participate in farming activities, they are able to relate theoretical knowledge to real-life situations. This makes learning more meaningful and easier to comprehend compared to classroom teaching alone.

Practical activities also enhance retention of knowledge. Students tend to remember what they do more than what they are told. Engaging in activities such as planting crops or managing livestock helps reinforce what is taught in class, leading to better academic performance in tests and examinations.

Furthermore, practical agricultural activities develop skills and competencies. Students acquire technical and manipulative skills such as handling farm tools, applying fertilizers, and caring for animals. These skills not only improve their academic performance but also prepare them for future careers in agriculture. Another important influence is that practical work increases students' interest and motivation. Students often find hands-on activities more engaging and enjoyable, which encourages active participation in learning. Increased interest leads to better concentration, improved study habits, and ultimately higher academic achievement.

In addition, practical agricultural activities promote problem-solving and critical thinking skills. Students learn to identify problems on the farm, such as pest infestation or poor soil conditions, and find appropriate solutions. This ability enhances their intellectual

development and contributes to better academic outcomes. However, the effectiveness of practical activities depends on the availability of resources such as school farms, tools, and qualified teachers. Where these are lacking, students may not fully benefit from practical learning, which can negatively affect their performance. Practical agricultural activities have a significant positive influence on students' academic performance by improving understanding, enhancing retention, developing skills, increasing interest, and promoting critical thinking.

In summary, the literature clearly indicates that practical agricultural activities positively influences students' academic performance by improving understanding, retention, application of knowledge, and motivation to learn Agricultural science.

Influence of Agricultural Activities on Academic Performance of Students based on Gender

The influence of agricultural activities on students' academic performance based on gender refers to how male and female students are affected differently when participating in practical Agricultural Science activities. Agricultural Science involves hands-on experiences such as crop production, animal husbandry, and the use of farm tools, which may attract or challenge students differently depending on gender roles, attitudes, and exposure.

In many educational settings, agricultural activities have been found to improve the academic performance of both male and female students, as practical work enhances understanding, retention, and interest in the subject. However, the level of participation and performance may vary between genders due to certain social and environmental factors.

Male students are often more actively involved in physically demanding agricultural

tasks such as land clearing, digging, and livestock handling. This increased participation can give them more practical exposure, which may positively influence their understanding and performance in Agricultural Science. As a result, they may perform better in practical-based assessments.

On the other hand, female students may sometimes participate less in physically intensive agricultural activities due to cultural expectations or limited encouragement in some environments. However, when given equal opportunity and support, female students also perform excellently in Agricultural Science, especially in areas such as crop management, record keeping, and theoretical understanding.

Studies examining gender differences in Agricultural science performance suggest that practical agricultural activities benefit both male and female students, although variations may exist depending on cultural and environmental factors.

According to Olatunji (2018), male students often show higher participation in physically demanding agricultural activities such as land preparation and livestock management, while female students tend to perform well in activities such as nursery management, record keeping, and crop processing. However, the study concluded that when both genders are equally exposed to practical activities, there is no significant difference in academic performance.

Similarly, Adebola (2019) found that practical agricultural activities reduce gender disparities learning outcome because hands-on experiences promote inclusion participation and collaboration learning. Female students, when encouraged and adequately supported, performed as well as their male counterparts in Agricultural Science examinations.

However, some studies attribute observed gender differences to societal stereotypes and unequal access to agricultural tools rather than inherent ability. When learning environments are gender-sensitive and supportive, practical agricultural activities enhance academic performance for all students regardless of gender factors such as cultural beliefs, teaching methods, availability of facilities, and teacher bias may influence how male and female students benefit from agricultural activities. In some cases, unequal participation can lead to differences in academic performance between genders.

In summary, agricultural activities positively influence the academic performance of both male and female students, but the extent of influence may vary depending on participation level, school environment, and equal access to practical learning opportunities. When properly managed, gender differences in performance become minimal, leading to improved academic outcomes for all students.

Influence of Agricultural Activities on Academic Performance of Students Based on School Location

Influence of agricultural activities on students' academic performance based on school location refers to how students' learning outcomes in Agricultural Science are affected by whether their school is located in a rural or urban area. School location plays an important role in determining the availability of resources, exposure to farming activities, and opportunities for practical learning.

In rural areas, students are often more exposed to agricultural practices such as crop farming, animal rearing, and land cultivation. This direct contact with farming activities makes Agricultural Science more familiar and practical for them. As a result, rural students

may show better understanding and improved academic performance because they can easily relate classroom lessons to real-life farming experiences.

School location plays a significant role in the implementation of practical agricultural activities and students' academic performance. Rural schools often have more access to land and farming resources, while urban schools face land constraints and limited facilities

A study by Okafor et al. (2019) revealed that students in rural schools tends to have a greater exposure to agricultural practicals due to the availability of land and proximity to farming communities. As a result, rural students often demonstrate better skills and more understanding of agricultural concepts.

Conversely, Adekunle et al. (2020) observed that urban schools face challenges such as limited space, lack of school farms and insufficient tools, which negatively affect students' exposure of practical learning. However, urban schools that adopt innovative approaches such as container farming, school gardens, and field trips can still achieve strong academic performance.

In addition, rural schools may have more access to farmland and natural resources needed for practical agricultural activities. This encourages frequent practical lessons, which help students to better understand agricultural concepts and improve their performance in examinations.

On the other hand, students in urban areas may have limited access to farmland and practical agricultural activities due to lack of space and facilities. As a result, Agricultural Science may be taught more theoretically than practically. This can make it difficult for students to fully understand some concepts, which may negatively affect their academic

performance. However, urban schools may compensate for this limitation by using teaching aids such as charts, models, videos, and virtual demonstrations. These resources can still enhance students' understanding, although they may not fully replace real-life practical experiences.

Furthermore, differences in school location can influence students' interest and motivation in Agricultural Science. Students in rural areas may develop more interest due to their daily exposure to farming activities, while urban students may see agriculture as less relevant unless properly motivated by teachers.

In summary, school location significantly influences the academic performance of students in Agricultural Science. Rural students often benefit from direct exposure to agricultural activities, while urban students may face limitations due to lack of practical resources. However, effective teaching methods and provision of instructional materials can help reduce the gap in performance between rural and urban students.

Overall, the literature suggests that while school locations influence access to practical agricultural activities, effective planning and resource utilization can enhance students' academic performance in both urban and rural settings.

Challenges Affecting Practical Agricultural Activities

Practical agricultural activities in secondary schools are faced with numerous challenges that hinder effective teaching and learning. These challenges affect the quality, consistency, and outcomes of agricultural practicals, and they ultimately limit students' acquisition of relevant agricultural skills.

One major challenge identified across multiple studies is inadequate funding. Many

schools lack sufficient financial resources to establish and maintain functional school farms. Without adequate funds, schools struggle to purchase basic farming tools such as hoes, cutlasses, watering cans, wheelbarrows, and inputs such as seeds, fertilizer, livestock feed, and pesticides. Ogbodo et al. (2018) emphasized that the absence of these essential materials forces teachers to rely heavily on theoretical teaching, thereby reducing the quality of practical exposure students receive.

Another significant challenge is limited land availability. In urban and semiurban schools, land scarcity is a critical constraint because school environments are often congested with administrative blocks, playgrounds, and classrooms. As a result, Agricultural Science teachers lack sufficient space to demonstrate activities such as crop production, animal husbandry, composting, or irrigation practices. Even when land is available, it is sometimes located far from the school premises, making regular student participation difficult.

Shortage of qualified Agricultural Science teachers also affects the effective implementation of practical activities. According to Adeola & Evans (2017), many teachers lack hands-on farming experience, while others are trained primarily in theoretical aspects of agriculture. Without adequate pedagogical and technical skills, teachers may avoid organizing practical sessions or may deliver them ineffectively. This challenge is compounded by large class sizes, which make supervision on the school farm difficult and time-consuming.

Environmental factors such as unpredictable weather conditions, pest infestations, and soil degradation also pose serious challenges. Okafor et al. (2019) noted that excessive heat, prolonged dry seasons, heavy rainfall, and outbreaks of pests can lead to crop failure. When school farm projects fail repeatedly, students may lose interest and motivation, and teachers

may become reluctant to continue practical activities.

Another challenge is the inadequate time allocation for practical lessons in the school timetable. Agricultural Science practicals require extended periods for land preparation, planting, weeding, observation, and harvesting. However, most schools allocate only one or two periods per week, which is insufficient for meaningful hands-on engagement. This time constraint often forces teachers to rush practical activities or skip them entirely.

Lack of instructional materials and modern technologies, such as demonstration charts, irrigation kits, planters, incubators, soil testing kits, and improved seedlings, further limits the depth and quality of practical instruction. In many cases, outdated or broken farm tools are used, compromising student safety and reducing the efficiency of activities.

Institutional challenges also play a role. These include weak administrative support, lack of monitoring by school leaders, poor maintenance culture, and minimal community involvement. In some schools, school farms are abandoned due to theft of farm produce, vandalism, or misuse of the land for noninstructional purposes. Poor recordkeeping and irregular implementation of the Agricultural Science curriculum further aggravate the problem.

Overcrowded classrooms and large student population also make it difficult for teachers to supervise practical work properly. This reduces students' active participation and individual learning experience during agricultural practices.

Another challenge is students' poor attitude or lack of interest in practical agriculture. Some students see agricultural activities as difficult or unimportant, which reduces their participation and performance.

Lastly, poor maintenance of school farms and equipment can lead to wastage of resources and limit continuous practical learning activities.

In summary, the major challenges affecting practical agricultural activities include inadequate funding, insufficient land, shortage of qualified teachers, environmental constraints, limited time allocation, inadequate tools and modern technologies, and weak institutional support. Addressing these challenges is crucial for improving the effectiveness of agricultural practicals and enhancing students' understanding, skill acquisition, and academic performance.

Another major challenge identified by Adeola & Evans (2017) is the shortage of qualified Agricultural Science teachers. Many teachers lack the technical skills or practical farming experience needed to deliver hands-on instruction effectively. Additionally, large class sizes and limited time allocated for practicals further restrict active student participation.

Collectively, empirical studies show that while practical agricultural activities are beneficial, their effectiveness is significantly constrained by resource-related, environmental, and institutional challenges.

Strategies to Enhance Practical Agricultural Learning

Enhancing practical agricultural learning requires a combination of adequate resources, teacher competency, curriculum strengthening, and institutional support. Research emphasizes that practical engagement improves students' performance, interest, and long-term agricultural skills. Therefore, adopting comprehensive strategies is essential for maximizing learning outcomes (Ajayi & Afolabi, 2009).

Provision of Modern Farm Tools, Inputs, and Infrastructure

Modern tools and functional infrastructure are foundational for effective practical learning. Schools must provide essential tools such as hoes, cutlasses, rakes, watering cans, sprayers, and protective gear, ensuring that each student can actively participate during practical sessions. Access to improved seeds, fertilizers, irrigation facilities, and well-structured farm plots enhances the quality of hands-on learning. Infrastructure such as fenced farms, storage sheds, shade houses, livestock pens, and compost pits supports year-round practical activities.

The availability of these resources increases student engagement, reduces time wasted due to tool shortages, and exposes learners to real-life agricultural environments. Schools equipped with functional infrastructure often record improved student competencies and stronger academic outcomes because practical experiences become more meaningful and continuous.

Strengthening Teacher Training and Professional Development

Teacher competence significantly determines the effectiveness of practical agricultural activities. Regular capacity-building workshops and in-service training enable teachers to update their knowledge in modern agricultural practices. Training may include:

- Improved crop and livestock production techniques.
- Use of simple mechanization tools.
- Safety protocols for handling equipment.
- Climate-smart agricultural practices.
- Agribusiness and entrepreneurship skills.

Professional development enhances teachers' confidence and equips them with current pedagogical skills. Well-trained teachers are more likely to implement innovative practical lessons, manage school farms effectively, and guide students through complex agricultural tasks.

Integration of ICT and Modern Techniques in Teaching Agriculture

ICT tools complement practical learning by providing digital demonstrations, real-time agricultural information, and interactive content. Examples include:

- Online videos demonstrating grafting, budding, irrigation setup, or livestock care.
- Mobile apps for soil testing, pest identification, and weather monitoring.
- Virtual farm simulations that introduce students to greenhouse technology or precision farming.

These digital tools bridge the gap between theory and practice, helping students visualize tasks before performing them physically. ICT integration also aligns agricultural education with global trends, preparing learners for modern agricultural systems.

Increased Government and NGO Support for School Farming Programs

Government involvement is essential for sustainable practical agricultural instruction. Support may be provided through:

- Funding for school farm development.
- Provision of seedlings, fertilizers, and farm equipment.
- Posting trained Agricultural Science teachers to schools.
- Deployment of extension officers for school outreach.

NGOs also contribute significantly by initiating agricultural projects, establishing school

gardens, and facilitating training sessions. These partnerships expose students to broader agricultural networks, increase resource availability, and strengthen practical learning outcomes.

Strengthening Community and School Partnerships

Collaborations with local farmers, cooperatives, and agricultural institutes create opportunities for experiential learning beyond the school environment. Community resource persons can assist in supervising practical work or demonstrating specialized skills such as pruning, vaccination, irrigation operation, and composting.

Such partnerships may also facilitate:

- Field trips to large farms or research centers.
- Student internships and holiday farm placements.
- Access to local expertise for special school projects.

These interactions enrich students' understanding and expose them to real agricultural systems and innovations.

Curriculum Improvement and Effective Time Allocation for Practicals

To enhance learning, the Agricultural Science curriculum must emphasize practical components and outline clear guidelines for implementation. Curriculum review ensures relevance to current agricultural realities, including organic farming, climate resilience, and agri-entrepreneurship.

Adequate time allocations for practical sessions are equally important. Weekly, structured hands-on lessons enable students to participate in continuous farm operations, such as seedling nursery preparation, transplanting, crop management, harvesting, and

record-keeping. Consistent exposure strengthens skill development and increases retention of theoretical knowledge.

Enhancing Student Motivation Through Clubs and Competitions

Agricultural clubs such as Young Farmers' Clubs help sustain students' interest through extracurricular engagement. Activities may include:

- Mini-projects like vegetable gardens or poultry rearing.
- Inter-school agricultural competitions.
- Exhibitions of student-grown crops or livestock.
- Recognition awards for outstanding performance.

Competitions foster healthy motivation, while project-based activities encourage leadership, teamwork, and responsibility. Students become more invested in agricultural learning when they see tangible outputs from their efforts.

Safety Protocols and Structured Practical Supervision

Safety is essential in practical agricultural activities. Schools must ensure the availability of first-aid kits and provide safety gear such as gloves, boots, and protective clothing. Teachers should supervise all farm tasks, educating students on safe tool handling and appropriate conduct.

Structured supervision reduces accidents, builds confidence, and promotes responsible learning behavior. When students feel safe, they are more willing to engage actively in hands-on agricultural tasks.

Summary of Literature Reviewed

This chapter reviewed relevant literature on the influence of practical agricultural

activities on students' academic performance in Agricultural Science. The review was guided by the Experiential Learning Theory by Kolb (1984) and the Constructivist Learning Theory by Piaget (1973) and Vygotsky (1978), which emphasize learning through direct experience, interaction, reflection and active participation. These theories provided a strong theoretical foundation for the study, justifying the integration of practical agricultural activities into the teaching and learning of Agricultural Science.

This literature established that Agricultural Science is a vital subject in secondary education designed to equip students with agricultural knowledge, practical skills and positive attitudes towards agriculture. It was observed that the subject is most effective when taught through a balance of theory and practical, as practical exposure enhances understanding and makes learning more meaningful. Practical agricultural activities were identified as structured hands-on tasks that enable students to apply classroom knowledge to real farming operations, thereby improving skills acquisition, problem-solving abilities and interest in the subject.

Empirically studies revealed that students who actively participate in practical agricultural activities perform better academically than those exposed mainly to theoretical instruction. Practical engagement was found to improve comprehension, retention of knowledge and application of concepts during assessment. Studies on gender showed mixed results, with some indicating no significant differences in academic performance between male and female students when equal practical opportunities are provided. Literature on school location indicated that environmental factors such as land availability and access to resources may influence students' exposure to practical activities and consequently, their

academic performance.

The review also identified several challenges affecting the effective implementation of practical agricultural activities in secondary schools. These include inadequate funding, insufficient land, shortage of qualified teachers, limited time allocation, poor infrastructure, environmental constraints and weak institution support. To address these challenges, the literature suggested strategies such as provision of adequate farm tools and facilities, teachers training and professional development, integration of ICT, curriculum improvement, effective supervision, increased institutional and community support.

In conclusion, the reviewed literature clearly established the importance of practical agricultural activities in enhancing students' academic performance in Agricultural science. However, gaps remain regarding localized empirical evidence on the influence of practical agricultural activities based on gender and school location in Ikpoba-Okha Local Government Area of Edo state. This study therefore seeks to fill these gaps by empirically examining the influence of practical agricultural activities on students' academic performance in public secondary schools in the study area.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter describes the methodology of this study under the following sub-headings:

- Research Design
- Population of the Study
- Sample and Sampling Techniques
- Research Instruments
- Validity of the instrument
- Reliability of the Instrument
- Method of Data Collection

Research Design

This study use descriptive survey research design which adopted the correlational design. This design is considered appropriate because it allows the researcher to collect, analyze, and interpret data from a population sample to describe the current state of practical agricultural activities and their relationship with students' academic performance in Agricultural Science.

Population of the Study

The population of this study consist of 250 Senior public secondary School students in Ikpoba Okha Local Government Area of Edo State.

Sample and Sampling Techniques

The sample of this study was 20 % of the total population which gave a sample of 50 students. They were selected using stratified sampling techniques which gave a sample of 50 secondary school students

Research Instrument

The instrument used for the collection of data was questionnaire. This questionnaire was tagged “Influence of Practical Agricultural Activities on Academic Performance of students in Public Secondary Schools in Ikpoba Okha Local Government, Edo state. It was scored using four points

Strongly Agree	-----	(SA)	4
Agree	-----	(A)	3
Strongly Disagree	-----	(SD)	2
Disagree	-----	(D)	1

Validity of the Instrument

The validity of the instruments were determined by the researcher supervisor and other lecturers in the institute of education, University of Benin. Their suggestions and corrections were used to produce the final draft of the instrument that was finally administered.

Reliability of the Instrument

The reliability of the instrument was carried out using Test Retest method within an interval of three weeks. Ten copies of the questionnaire were administered to public secondary schools students who were not part of the sample used for the study. After two weeks, the researcher went back and administered the same instrument on the same students to check if the two results correlated. Therefore, the Pearson Product Moment Coefficients (Pearson r) was used to determine their level of reliability. A correlation coefficient of 0.90 was obtained which showed that the instrument was reliable.

Method of Data Collection

The researcher administered the instrument with the permission of year heads in the selected schools. A total of 50 copies of the questionnaire were administered to the respondents and retrieved immediately.

Method of Data Analysis

Data collected will be inputted into the computer and analyzed using the SPSS: mean and standard deviation will be employed to analyze the data. While the mean is used to determine the degree of responses, the standard deviation is used to determine the extent at which the respondents' responses cluster or deviate around the mean. The mean rating of 2.50 is used for decision point such that only items less than 2.50 is regarded as disagree while mean rating equals or above 2.50 is regarded as agree.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

This chapter concerns the analysis of data, the presentation of results, and the discussion of findings.

Presentation of Results

Research Question One

What is the influence of practical agricultural sciences activities on academic performance of students?

Table 1: Descriptive Statistic of the influence of practical agricultural sciences activities on academic performance of students

Items	Mean	Std. Deviation	Remarks
Practical agricultural activities improve teaching agricultural science	3.88	.32	Agree
Practical agricultural activities help students to understand agricultural science	3.37	.58	Agree
Practical agricultural activities improve academic performance of students	3.88	.32	Agree
Practical work help students to relate theory to real life agricultural situation	3.90	.30	Agree

Table 1 shows the mean and standard deviation of the influence of practical agricultural sciences activities on academic performance of students. The results indicate that practical agricultural work help students relate theory to real life agricultural situation, improve teaching of agricultural science, improve academic performance and help understand agricultural science. The mean score for all the items are generally above a criterion mean of

2.50 indicating that practical agricultural activities influences academic performance of students.

Research Question Two

To what extent does practical agricultural science activities influences academic performance of students?

Table 2: Descriptive Statistics of the extent practical agricultural science activities influences academic performance of students

Items	Mean	Std. Deviation	Remarks
Agricultural Science lessons are regularly conducted in secondary schools	3.06	.58	Agree
Practical agricultural activities help students improve Teaching agricultural science	3.88	.32	Agree
Practical agricultural activities help students to Understand agricultural science	3.37	.58	Agree
Practical work help students improve academic Performance of students	3.88	.32	Agree
Practical work helps students to relate theory to real life Agricultural situation	3.90	.30	Agree
Cluster Mean	18.09	0.97	

Table 2 presents the mean analysis employed to determine the extent of agreement to a 4-point Likert scale on the influence of practical agricultural science activities on academic performance of students. The results indicate that all the items have a mean ratings ranging from 3.06 to 3.90. The summated cluster mean of 18.09 shows practical agricultural activities to a very high extent influences academic performance of students.

Research Question Three

What are the recommendations for improving practical agricultural activities in secondary schools?

Table 3: Descriptive Statistics of Recommendations for Improving Practical Agricultural Activities in Secondary Schools

Items	Mean	Std. Deviation	Remarks
Provision of modern farm tools will improve students' academic performance	3.85	.36	Agree
Regular agricultural practical lessons should be encouraged in secondary schools	3.85	.36	Agree
Schools farm should be properly maintained to support learning	3.97	.18	Agree

Table 3 presents the mean and standard deviation of the recommendations for improving practical agricultural activities in secondary schools. The results indicate a general agreement on the recommendations for improving agricultural activities in secondary schools, as reflected by the mean scores which are above a criterion mean of 2.50.

The results further indicates that the respondents agreed that schools farm should be properly maintained to support learning, regular agricultural practical lessons should be encouraged in secondary schools and provision of modern farm tools will improve students' academic performance.

Hypothesis One

There is no significant difference in the extent agricultural activities influences academic performance based on students gender

	Gender	N	Mean	Std. Deviation	t	p-value	Remark
Total Practical Agricultural Activities	Male	30	15.67	.92	4.18	.000	Significant
	Female	30	14.40	1.38			

Table 4 shows independent-samples t-test conducted to compare the difference in mean score on the extent agricultural activities influences academic performance based on students gender. The table shows the mean score for male ($M=15.67$, $SD=.92$) and female ($M=14.40$, $SD=1.38$), $t(58) = 4.18$, $p<.001$. Since the p-value is less than alpha value of 0.05, the null hypothesis which states there is no significant difference in the extent agricultural activities influences academic performance based on students gender is rejected. This implies there is significant difference in the extent agricultural activities influences academic performance based on students' gender.

Hypothesis Two

There is no significant difference in the extent agricultural activities influences academic performance based on students location

	Location	N	Mean	Std. Deviation	t	p-value	Remark
Total Practical Agricultural Activities	Urban	30	15.83	.38	5.83	.000	Significant
	Rural	30	14.23	1.45			

Table 4 shows independent-samples t-test conducted to compare the difference in mean score on the extent agricultural activities influences academic performance based on school location. The table shows the mean score for urban ($M=15.83$, $SD=.38$) and rural ($M=14.23$, $SD=1.45$), $t(58) = 5.83$, $p<.001$. Since the p-value is less than alpha value of 0.05, the null hypothesis which states there is no significant difference in the extent agricultural activities influences academic performance based on school location is rejected. This implies, there is significant difference in the extent agricultural activities influences academic performance based on school location in favour of students in Urban.

Discussion of Findings

The study examined the influence of practical agricultural on academic performance of secondary school students. The findings revealed that practical agricultural activities influenced academic performance of students. This finding is in line with Akinbode (2019) who reported that students who participated actively in school practical activities such as crop cultivation, livestock rearing and record keeping achieve significantly higher scores in agricultural science examination than students exposed to mainly theoretical instruction. This suggests that students who have opportunities to engage in opportunities to engage in hand-on experiences are likely to have more understanding of the technicalities involved in Agricultural Science, Hence better academic performance.

In research question two the study further revealed that practical agricultural activities influence academic performance of secondary school students to a very high extent. This findings corroborates with Okorie and Eze (2018) who emphasized that practical agricultural activities enhance students' psychomotor and effective learning outcomes, which complement

cognitive achievement. They further emphasized that students do not only understand concepts better but also develop confidence, discipline and positive attitude towards agricultural science learning to improved overall academic performance.

Similarly, In line with Adeyemi and Oluwafemi (2020), in quasi-experimental study, found that students taught using practical-based instructional strategies performed better academically than those taught through lecture methods alone.

The study also reveals some recommendations for improving practical agricultural activities in secondary schools like:

Providing of modern farm tools, according to Ogbodo et al., (2018) emphasized that the absent of these essential materials forces teachers to rely heavily on theoretical teaching, thereby reducing the quality of practical exposure students receive.

Regular agricultural practical lessons should be encouraged, according to the state of Food and Agricultural Organization (FOA) (2018) highlights the role of practical farming in improving food security and livelihoods. Making agricultural activities practical and regular helps individuals gain real experience, boosts productivity, and strengthens the economy. It bridges the gap between theory and practice, ensuring agriculture remains sustainable and rewarding.

Schools farm should be properly maintained to support learning in secondary schools. Proper maintenance of school farms is essential for effective teaching and learning in secondary schools. Well-managed farms provide students with practical experience that complements classroom theory and builds valuable life skills. In accordance to the World Vision International (2026 report), demonstrates that well maintained school farms help

students acquire practical farming skills while supporting food security and school feeding programs. The study further explain in research question three indicates that there is no significant difference in the extent agricultural activities influences academic performance based on students gender, According to Olatunji (2018), male students often show higher participation in physically demanding agricultural activities such as land preparation and livestock management, while female students tends to perform well in activities such as nursery management, record keeping, and crop processing. However, the study concludes that when both genders are equally exposed to practical activities, there is no significant difference in academic performance.

Similarly, Adebola (2019) found that practical agricultural activities reduces gender disparities in learning outcomes because hands-on experiences promote inclusive participation and collaborative learning. Female students, when encouraged and adequately supported perform as well as their male counterparts in Agricultural examinations.

However, some studies attribute observed gender differences to societal stereotypes and unequal access to agricultural tools rather than inherent ability. When learning environments are gender-sensitive and supportive, practical agricultural activities enhance academic performance for all students regardless of gender.

Research question four and five revealed that there is significant difference in the extent agricultural activities influences academic performance based on school location in favor of students in Urban. In contrary to Okafor et al., (2019) who revealed that students in rural schools tends to have greater exposure to agricultural practicals due to the availability of land and proximity to farming communities. The reason for the difference maybe that the students

in this sample where exposed to innovative approaches such as container farming, school gardens and field trips can still achieve strong academic performance according to Adekunle et al., (2020) while school location influences access to practical agricultural activities, effective planning and resource utilization can enhance students academic performance in both rural and urban setting.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

This study is to investigate the influence of practical activities on Academic performance of student in public secondary schools in Ikpoba Okha Local Government of Edo State. The purpose of this study was to determine the influence of practical agricultural activities on academic performance of student in public secondary schools in Ikpoba Okha Local Government of Edo State.

To guide this study, five research questions was raised:

1. What is the influence of practical agricultural science activities on academic performance of students in secondary schools?
2. To what extent does practical agricultural science activities influences academic performance of students in secondary schools?
3. To what extent does agricultural activities influences academic performance of students based on gender?
4. To what extent does agriculture activities influences academic performance based on students location?
5. What are the recommendations for improving practical agricultural activities in secondary schools?

The research instrument for the study was descriptive survey research design which adopted the correlational design. The population of the study was 250 public secondary school students in Ikpoba Okha Local Government Area of Edo state, the sample of the study

was 20% of the total population which gave a sample of 50 students in Ikpoba Okha Local Government Area of Edo state. Pearson(r) was used to determine the level of reliability and a correlation coefficient of 0.90 was obtained which showed that the instrument was reliable.

Based on the analysis of data, the following findings were made:

1. The result indicates that practical agricultural activities helps students relates theory to real life agricultural situations,improving agricultural science teaching, improving academics performance and help secondary schools students understand agricultural science
2. The result shows that practical agricultural activities agricultural activities to a very high extent influences academic performance of students in secondary schools. The result further indicates that the respondents agrees that school farms should be properly maintained to support learning, regular agricultural practical lesson should be encouraged and provision of modern tools will help improve the academic performance of students in secondary schools.
3. There is a significant difference in the extent to which agricultural activities influences academic performance of students in secondary schools
4. There is a significant difference in the extent of which agricultural activities influences academic performance based on student gender
5. There is no significant difference in the extent to which agricultural activities influences academic performance on students in secondary schools based on location

Conclusion

Based on the findings of this study, the study concluded that practical agricultural work helps secondary school students relates theory to real life agricultural situations, improving academic performance and helps secondary school students understand agricultural science. Also there is a significant influence of practical work on academic performance of secondary school students, practical agricultural activities to a very high extent influences academic performance of secondary school students. Similarly there is a very high significance on practical agricultural activities on academic performance of secondary school students.

Therefore, the school administrators should put more efforts to improve agricultural practical activities among students in public secondary schools.

Implications of Findings

The implication is that practical agricultural activities helps students understand concepts in subjects like biology, chemistry, and geography, leading to better academic results.

Another implication is that practical agricultural activities makes students gain valuable life and vocational skills such as farming techniques, problem solving and critical thinking which complement academic success.

A similar implication is that practical agricultural activities makes learning more interactive and interesting, reducing boredom and improving attendance and participation.

Another implication gotten from the study is that Educational authorities may need to strengthen agricultural science programs by increasing practical components in the curriculum. A similar implication is that government and school administration may be encouraged to invest more in schools farm, tools and agricultural laboratories.

Recommendations

Based on the findings of the study the following recommendations were made:

1. Schools should design balanced timetables that allocate adequate time for both practical agricultural activities and academic subjects to prevent interference with students' study
2. Teachers should effectively link practical agricultural activities with classroom lessons so that students can clearly understand how theory applies in real-life situations.
3. Government and school authorities should provide necessary facilities such as school farms, tools, irrigation systems, and modern equipment to make practical agriculture more effective and less stressful
4. Teachers should receive regular training, workshops, and seminars to improve their skills in delivering practical agricultural education and managing students during fieldwork.
5. Students should be properly supervised during practical activities to ensure that learning objectives are achieved and that activities do not become labor-intensive or exploitative.

Contribution to Knowledge

This study contributes to existing knowledge in the field of agricultural education and academic performance in the following ways:

- The study provides empirical data on the relationship between practical agricultural activities and the academic performance of secondary school students, helping to fill

gaps in existing research.

- It strengthens the understanding of how practical agriculture influences students' comprehension, retention, and overall academic performance.
- The findings offer useful information for policy makers and curriculum planners in improving agricultural science programs in secondary schools.
- The study highlights effective strategies for integrating practical and theoretical teaching, thereby contributing to better instructional approaches in agricultural education.
- It identifies key challenges (such as time constraints, lack of resources, or student fatigue) associated with practical agricultural activities, which can guide future improvements.
- The research serves as a reference point for future scholars who may wish to explore related topics such as vocational education, skill acquisition, or other practical-based subjects.
- It adds to the body of knowledge that promotes agriculture as an important subject for both academic development and career opportunities among students.
- The study contributes context-specific knowledge (e.g., within Nigerian secondary schools) that reflects the realities of students, teachers, and available resources.

Suggestion for Further Studies

Based on the limitations and findings of the studies, the following areas were suggested for further studies:

- Future researchers should conduct similar studies in different states or regions to

compare results and determine whether findings are consistent across various educational and cultural settings.

- Further studies could adopt a longitudinal approach to examine the long-term effects of practical agricultural activities on students' academic performance and career
- Researchers can investigate whether practical agricultural activities affect male and female students differently in terms of academic performance
- Future studies should explore how practical agriculture influences performance in other related subjects such as biology, chemistry, and geography.
- Further research could examine how the availability or lack of agricultural facilities (e.g., school farms, tools, irrigation systems) affects the effectiveness of practical learning.
- Researchers may study how teachers' qualifications, experience, and teaching methods influence the success of practical agricultural activities.
- Future studies could focus on students' perceptions, attitudes, and interest in agricultural activities and how these factors relate to academic performance.
- Further research can explore the role of modern agricultural technologies (e.g., mechanization, digital tools) in enhancing practical learning and student outcomes.
- A comparative study between private and public secondary schools could provide deeper insights into differences in implementation and outcomes.
- Future researchers should investigate how students' family background and economic status influence participation in agricultural activities and academic achievement.

REFERENCES

- Adebayo, A., & Adesope, O. M. (2017). Agricultural education and training for sustainable development in Nigeria. *Journal of Agricultural Extension*, 21(3), 1–10.
- Adebola, T. (2019). "Examining plant variety protection in Nigeria: Realities, obligations and prospects." *The Journal of World Intellectual Property*, 22(1-2), 36-58.
- Adekunle, A. A., & Aina, O. S. (2012). Improving agricultural education through practical learning approaches in Nigerian schools. *Journal of Agricultural Education and Extension*, 18(3), 245–259.
- Adekunle, A. A., Fatunbi, A. O., & Jones, M. (2020). Agricultural innovation systems and innovation platforms: Concepts, practices and lessons for development. *International institute of tropical agriculture*.
- Adeola, O., & Evans, O. (2017). Financial inclusion, financial development, and economic diversification in Nigeria. *Journal of African Business*, 18(3), 1–15.
- Adeyemi, A. A., & Oluwafemi, O. O. (2020). Instructional strategies and student outcomes in Nigerian education. *International Journal of Innovative Science and Research Technology*.
- Ajayi, A. I., & Afolabi, F. O. (2009). The role of tertiary education in national development: The Nigerian scenario. *Journal of Teacher Education*, 10(1), 1–10.
- Ajayi, I. A., & Afolabi, F. O. (2009). *The role of agricultural education in developing students' interest in farming*. Shows how practical exposure influences students' attitudes and participation.
- Akinbode, A. A. (2019). Effect of practical teaching methods on students' performance in agriculture. *Agricultural Journal*, 12(3), 45–52.
- Akinbode, I. A. (2019). The role of practical agriculture in skill acquisition among Nigerian secondary school students. *Nigerian Journal of Vocational Education*, 14(2), 45–53.
- Asiegbu, S. N., & Ugwoke, C. U. (2017). Sustainable agricultural education as a tool for training youths for achieving the Millennium Development Goals (MDGs) in Nigeria. *International Journal of Agricultural and Home Economics Education*. Demonstrates the effectiveness of hands-on training in skill acquisition.
- Emma-Okafor, L. C., Obiefuna, J. C., Okoli, N. A., Nwaigwe, M. O., Abana, P. C., Keyagha, E. R., & Ibeawuchi, I. I. (2019). Moisture conservation techniques and micro-climate moderation for late season production of selected maize (*Zea mays*) varieties in Southeastern Nigeria. *Journal of Agriculture and Food Environment*, 6(1), 32–44.

- Federal ministry of education(2014). *National Policy on Education* (6th ed.). Lagos, Nigeria: NERDC Press.
- Food and Agricultural organization (2018). *The state of Food and Agriculture* (2018)
- Food and Agriculture Organization (2022). *The State of Food and Agriculture* 2022.
- Foundational theory explaining why practical engagement improves learning.
- Jean Piaget.(1937).*To understand is to invent: The future of education*. New York, NY: Grossman.
- Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*.
- Lev Vygotsky.(1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Ogbodo, J. A., Tembe, E. T., & Peter, J. G. (2017). *Assessing the issues and prospects of sustainable forestry in Nigeria*. World Farmers' Organisation Farm Letter.
- Okorie, J. U., & Eze, T. I. (2018). Practical agriculture: A tool for youth empowerment in Nigeria. *International Journal of Educational Research*, 7(4), 112
- Olatunji, S. O. (2018). *Evaluation of Agricultural Transformation Agenda Support Programme Phase-1 (ATASP-1) in Kebbi and Sokoto States*.
- Onwumere, M., Modebelu, M. N., & Chukwuka, I. (2016). Improving agricultural science education through effective practical teaching methods in secondary schools in Nigeria. *Journal of Agricultural Education and Practice*, 7(2), 45–52.
- Osinem, E. C., & Nwoji, U. C. (2010). *Student Industrial Work Experience Scheme (SIWES) in Nigeria*.
- Ugwoke, C. U. (2017). Sustainable agricultural education and youth empowerment for poverty reduction and MDGs achievement.
- World Bank (2020). Agriculture and food overview.
- World Vision International. (2026). *Famine prevention & food security policy brief*. World Vision International.

APPENDIX

Institute of Education,
University of Benin,
Benin City.

Dear Respondent,

REQUEST FOR COMPLETION OF QUESTIONNAIRE

I am a post graduate student of the Institute of Education in the University of Benin, I am currently conducting a research on the “Influence of Practical Agricultural Activities on Academic Performance of Students in Public Secondary Schools”. Your honest response is of great importance to this study. I assure you that all responses will be treated with utmost confidentiality.

Yours faithfully,

Akogun Anita Onus

(Researcher)

QUESTIONNAIRE

Instruction:

Please tick (✓) the option that best represents your opinion.

There is no right or wrong answer. All responses will be treated confidentially.

Response Scale:

Strongly Agree (SA) = 4, Agree (A) = 3, Strongly Disagree (SD) = 2, Disagree (D) = 1

SECTION A: Personal Information

Please tick (✓) where applicable.

Gender: Male Female

Class Level: SS1 SS2 SS3

School Location: Urban Rural

Influence of Practical Agricultural Activities on Academic Performance

S/N	ITEMS	SA	A	D	SD
1	Agricultural Science practical lessons are regularly conducted in secondary schools.				
2	Practical agricultural activities improves teaching of Agricultural Science in secondary schools				
3	Practical agricultural activities help students to understand Agricultural Science.				
4	Practical agricultural activities improve academic performance of secondary school students.				
5	Practical work helps secondary school students to relate theory to real-life agricultural situations.				
6	Both male and female students are equally involved in agricultural practical activities in secondary schools.				
7	Students in rural schools have more opportunities for agricultural practical than those in urban schools.				
8	School location affects the availability of land for agricultural practical activities.				
9	Lack of funds affects the organization of agricultural practicals in secondary schools.				

10	Shortage of agricultural tools limits students' participation in practicals.				
11	Inadequate time is allocated for agricultural practical lessons in secondary schools.				
12	Lack of qualified teachers affects agricultural practical activities.				
13	Provision of modern farm tools will improve students' academic performance.				
14	Regular agricultural practical lessons should be encouraged in secondary schools.				
15	School farms should be properly maintained to support learning.				