COMPETENCY NEEDS OF AGRICULTURAL SCIENCE TEACHERS FOR FARM MANAGEMENT IN SECONDARY SCHOOLS IN EKITI STATE, NIGERIA

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Abstract

This study investigated the competency needs of Agricultural Science teachers in farm management in secondary schools in Ekiti State, Nigeria. Three research questions and one research hypothesis guided the study. This study adopted a descriptive survey design. The population of the study consisted of 248 Agricultural Science teachers in public secondary schools in Ekiti State. Instrument tagged Questionnaire on the Competency Needs of Agricultural Science teachers for Farm Management in Secondary Schools (QCNASTFM)' was used for data collection. The face and content validity of the instrument was ensured by experts, the reliability of instrument was established through Cronbach Alpha reliability testing method, yielding a reliability coefficient of 0.77. The instrument was administered by the researcher and three trained research assistants after obtaining permission from the authority of the sampled schools. The research questions were answered using frequency counts, percentages, mean and standard deviation while the hypotheses were tested using Pearson's Products Moments Correlation. (PPMC)at 0.05 level of significance. The findings of the study revealed that the level of Agricultural Science teachers' competency in farm management was moderately high, no significant difference between teachers' academic qualifications and their competency in farm management, no significant difference between teachers' teaching experience and their competency in farm management. It also revealed that there is relationship between professional development programs and their competency in farm management in Secondary schools in Ekiti State. It was concluded that formal education and experience alone may not enhance competency, targeted professional development programs play a crucial role in improving teachers' skills and effectiveness in farm management. It was recommended that government should design professional development programs tailored to address current gaps in farm management competency, incorporating real-life scenarios, case studies, and modern agricultural techniques.

Keywords: Teachers Skill, Agricultural Science Teachers, Competency Needs, School Farm, Farm Management

Introduction

Agricultural science is a broad discipline that encompasses the study of crop production, animal husbandry, soil management, agribusiness, and agricultural technology. In the Nigerian context, agricultural science is taught at various educational levels to equip students with both theoretical knowledge and practical skills needed for sustainable food production and economic development. According to Olaitan (2017) and Famiwole (2024), agricultural science is the study of the principles and practices of agriculture, including crop cultivation, animal production, soil science, and agribusiness management. It integrates science, technology, and economics to ensure food security and sustainable agricultural development. The effective teaching of Agricultural Science, especially at the secondary school level, is crucial for stimulating students' interest in agriculture, equipping them with entrepreneurial skills, and preparing them for further studies and careers in the agricultural sector. In line with this objective, the curriculum of Agricultural Science in Nigerian secondary schools emphasizes practical experiences alongside theoretical knowledge. One of the most effective strategies for achieving this integration is the establishment and proper management of school farms (FGN, 2013) Federal Republic of Nigeria, 2013).

A school farm is an instructional facility designed to provide learners with hands-on experiences in crop and animal production, farm record keeping, and simple agribusiness practices. Beyond serving as a laboratory for the application of agricultural theories, the school farm also provides a platform for inculcating positive attitudes towards farming, encouraging teamwork, and developing practical competencies needed for self-reliance (NOUN, 2014). It is an area of land that is devoted primarily to agricultural practices with the sole objective of producing food and livestock. The school farm has been perceived as very important for complimenting classroom instructions and theories with practical activities or learning by doing. One of the major objectives of managing a school farm is for development of skills in students in other to stimulate their interest in farming. The National Education Research and Development Council (NERDC, 2008) specified that all secondary schools in Nigeria should establish a school farm where arable crops and at least two ruminant animals such as goat, sheep, cattle can be managed. Studies have shown that students exposed to well-managed school farms demonstrate better comprehension of agricultural concepts, improved academic performance, and higher interest in pursuing agricultural-related careers (Onwumere, 2016; Hummingbird Journals, 2024). However, despite the acknowledged importance of school farms, their effective management in Nigerian secondary schools remains a major challenge. Research indicates that many school farms exist only in name, while those that are functional often suffer from inadequate funding, lack of infrastructure, poor security, and insufficient teacher motivation (Obue, 2019; Ikehi, et al., 2024). Teachers have also reported difficulties in sustaining school farm activities due to limited institutional support, encroachment of school land, theft, and shortage of farm inputs (Okon, 2016). Furthermore, personality traits and managerial competencies of Agricultural Science teachers have been identified as

significant factors influencing the effectiveness of school farm management.

School farm management refers to the systematic process of planning, organizing, implementing, supervising, and evaluating farm activities carried out on a school farm in order to achieve the objectives of Agricultural Science education (Obue, 2019). It involves the coordination of resources such as land, labour, capital, and farm inputs to ensure that agricultural enterprises established within the school environment serve both instructional and productive purposes. The management of a school farm is directed towards achieving several interrelated objectives; to provide students with hands-on experiences that complement theoretical teaching in Agricultural Science, to develop students' practical competencies in crop production, livestock management, farm record-keeping, and agribusiness, to instill entrepreneurial skills that can prepare students for self-reliance and reduce unemployment, to serve as a demonstration ground for improved farming techniques and innovations, to generate revenue for the school through the sale of farm produce, which can be reinvested into the farm. Its effective management depends on the level of knowledge, attitude skills and competence of the agricultural science teacher. Agricultural Science teachers are central to the effective management of school farms. Their characteristics, both personal and professional, strongly influence the extent to which they can translate theory into practice for students. A teacher of agricultural science is a professional who is trained in the pedagogical and technical areas of agricultural science and charged with the responsibility of imparting knowledge, skills and attitudes to each students. Agricultural science teachers play a crucial role in shaping students' knowledge, skills, and attitudes toward agriculture. In Nigeria, they serve as facilitators of both theoretical and practical learning, helping students develop competencies in crop production, animal husbandry, agribusiness, and environmental sustainability. Their effectiveness is determined by their characteristics and the roles they play in agricultural education. Therefore, addressing teachers' professional needs is critical to achieving the objectives of Agricultural Science education in Nigeria. Competence on the part of Agricultural science teachers are required to effectively manage a school farm. He is supposed to be responsible for the planning, supervising the establishment and operation of the school farm so that the students can effectively learn about how to grow crops, manage livestocks and develops practical skills. The extent to which a teacher of Agricultural science could perform his/her managerial and operational functions often depend on the level of competency skills and capabilities possessed by each teacher.

Competency in teaching involves the possession of relevant knowledge, skills, attitudes, and values required to perform specific teaching tasks effectively. In the context of farm management, this includes skills in budgeting, record keeping, enterprise selection, soil and crop management, pest control, and livestock production. Despite the emphasis on practical agriculture, many secondary schools in Nigeria have been reported to lack functional school farms, and where they exist, they are often poorly managed (Ogunbameru, 2019). This situation raises concerns about whether teachers possess the required competencies to

manage school farms effectively and to impart farm management skills to students. In the context of school farm management, identifying and addressing competency needs of Agricultural Science teachers is crucial for effective curriculum delivery, skill acquisition among students, and the achievement of national goals in food security and youth empowerment. In the context of school farm management, identifying and addressing competency needs of Agricultural Science teachers is crucial for effective curriculum delivery, skill acquisition among students, and the achievement of national goals in food security and youth empowerment.

Competency needs refer to the specific gaps between the competencies required for effective performance in a role and the competencies currently possessed by an individual. They represent the areas in which improvement, training, or development is necessary to enhance effectiveness. In Agricultural Science education, competency needs of teachers in farm management are those areas of farm planning, record keeping, enterprise selection, livestock and crop production, farm budgeting, and supervision where teachers lack sufficient expertise to effectively manage school farms. These unmet competencies hinder the ability of teachers to translate the Agricultural Science curriculum into meaningful practical experiences for students (Okon, 2021; Ikehi et al., 2024). Addressing these gaps through training, workshops, and continuous professional development is essential for improving agricultural education outcomes.

Statement of problem

In many secondary schools, farm management is a vital component of the Agricultural Science curriculum, intended to provide students with hands-on experience in planning, organizing, and operating school farms. However, the effective delivery of farm management instruction depends largely on the competencies of Agricultural Science teachers.

Despite the observed importance of farm management, evidences such as over-reliance on theory instead of practical teaching, lack of practical and managerial skills suggests that many Agricultural Science teachers lack the required competencies to effectively teach and manage school farms. These competencies include technical knowledge, practical skills, planning and organizational abilities, resource management, and the ability to incorporate modern agricultural technologies and practices. This often results in poorly managed school farms, limited practical exposure for students, and overall inefficiencies in delivering the curriculum.

Compounding this problem is the fact that many teachers seem to have limited access to professional development opportunities that focus specifically on farm management. In some cases, teacher training programs appear not to sufficiently address the practical aspects of farm operations. Consequently, students graduate with theoretical knowledge but lack the practical competencies required for meaningful participation in agricultural enterprises.

Given the increasing emphasis on skill acquisition and entrepreneurship in education, there is an urgent need to assess the specific competency needs of Agricultural Science teachers in farm management. Identifying these gaps is essential for designing targeted training programs, revising curriculum content, and ultimately improving the quality of

agricultural education in secondary schools.

The main purpose of the study is to assess the competency needs of Agricultural Science teachers for farm management in secondary schools in Ekiti State. Specifically, the study

i. determined the level of Agricultural Science teachers competencies in farm management in secondary schools in Ekiti State
ii. identified specific areas where teachers require competencies in farm management skills in secondary schools.
iii. examined the influence of teacher experience on farm management competencies.
iv. ascertained available professional development activities for enhancing farm management skills.

Research Questions

The following research questions were raised to guide this study.

i. What are the level of Agricultural Science teachers competencies in farm management in secondary schools in Ekiti State?
ii. What specific areas of farm management do Agricultural Science teachers identify as needing competencies?
iii. What are the influence of teacher experience on farm management competencies.
iv. What are the professional development programmes for enhancing farm management skills.

Research Hypothesis

The following null hypotheses were formulated and tested at 0.05 level of significance:

i. There is no significant influence in teaching experience and farm management competency.
ii. There is no significant relationship between professional development opportunities and competency in farm management.

Literature Review

Agricultural science is largely expressed as the application of scientific principles for successful production of crops and livestock and other uses for man's benefit. Agricultural science according to Owens (2015) is the cultivation of land for production of crops and rearing of animals for human use, and is the deliberate effort made by man to till the soil, cultivate crops and rear animals for food and sell to the final consumer. It involves various activities such as crop cultivation, animal husbandry, soil management, pest and disease control, and the application of scientific knowledge to enhance productivity and sustainability in agricultural systems. Agricultural science, as a subject in secondary schools, seeks to teach the students the principles of using scarce resources to produce crops and animals to feed the world's population and to service other related uses (Ikehi, Ifeanyieze, & Ugwuoke, 2019; Iderawumi, 2021). As posited by Ezeani (2019), Agricultural Science is not merely a theoretical subject but one that must be taught through experiential learning. This practical approach helps bridge the gap between knowledge and skills, making students more competent and job- ready. The NERDC (2008) specified that secondary school establish a school farm where arable crops and AR least two ruminant animals such as goat, sheep, cattle can be managed.

School farm as defined by Famiwole (2022) is a land laboratory, specifically designed and operated, for the purpose of carrying out practicals in agricultural science or education in order

to impart knowledge and managerial skills to students through practice. It is an area specifically earmarked for agricultural activities, usually sited in the school or at a walking distance to the school. The school farm is typically supervised by agricultural educators or instructors who provide guidance and support to students. They help students set goals, provide technical expertise, and ensure the safety and welfare of the animals and crops on the farm. The school farm contains two main sections: the crop section and the livestock section. (Iderawumi 2020). School farm provides field for learning outside the classroom. It provides both formal and informal education and contributes to a cadre of young knowledge workers associated with relevant disciplines to issues associated with food production and related disciplines. Growing food increases the students' interest to attend school. This will enable the pupils to garner practical knowledge in Agricultural Science as it re-enforces and bring to live what is taught in classroom. On the school farm the students learn how to handle farming equipment, farming techniques, farming systems like mixed cropping, crop rotation, etc. School farms serve as laboratories for practical skills development practical, agriculture is incomplete. Teachers play a crucial role in mentoring students throughout their experiences on the school farm.

Teacher is a person trained and groomed from teacher preparation institutions for quality of skills, knowledge and attitudes to students Okuku (2019). Similarly, Ndem (2016) stated that agricultural science teacher is a person professionally trained in the field of agriculture to acquire skills, knowledge, technical know-how and methodology needed for the teaching of agricultural science. Also, Babayo (2019) described teachers of agricultural science as a trained individual in the pedagogical and technical areas of agriculture and is charged with the responsibility to imparting knowledge, skills and attitudes to students. Ilesanmi et al (2022) sees Agricultural science teachers as a custodians of knowledge and disseminators of agricultural practice. Furthermore, Babayo and Kesiki (2019) stated that teacher of agricultural science is a person trained in the pedagogical and technical areas of agriculture and charged with the responsibility of imparting knowledge and skills in agriculture to students. Research indicates that several Agricultural Science teachers may not have received adequate training in farm management during their pre-service or in-service training, which affects their performance (Nwachukwu, 2014). Moreover, the growing complexity of agriculture due to technological and environmental changes demands that teachers continuously upgrade their skills to remain effective (Ajayi & Akinyemi, 2020). Identifying and addressing the competency needs of Agricultural Science teachers is therefore crucial for improving the teaching and practice of farm management in schools.

According to Okorie (2021), competency needs are the deficiencies in the knowledge, skills, and attitudes that individuals require to perform their occupational roles successfully. They emerge when expected performance standards surpass actual performance levels. In the context of Similarly, Akinyemi (2020) conducted a study that focused on identifying specific skill gaps in farm management among Agricultural Science teachers in Lagos State. The study revealed gaps in machinery operation, farm record-keeping, and resource allocation. Interview responses highlighted the need for practical

demonstrations and access to real farm environments for skill acquisition. Ibrahim, &Abdullahi, (2019) examined farm management competencies among Agricultural Science teachers in Northern Nigeria. Findings indicated that teachers lacked competencies in farm planning, risk assessment, input procurement, and agribusiness strategies. The study recommended the inclusion of these components in teacher retraining programs.

The extent to which a teacher of Agricultural science could perform his/her managerial and operational functions often depend on the level of competency skills and capabilities posessed by each teacher.

Skill is the ability to effectively and efficiently carry out a particular activity or task, it involves both the practical application of knowledge and mastery of certain tasks or action. A teacher's skill can also be referred as the proficiency in performing a task that has been developed through experience and training. For effective management of a school farm, there's the need for skill development for every teacher of Agricultural science. Skills development refers to the process of improving, enhancing, or acquiring new abilities, competencies, or expertise to perform tasks or jobs more effectively. It encompasses a wide range of activities, including education, training, hands-on experience, mentoring, and self-learning, aimed at upgrading a person's ability to meet the demands of a particular role or to prepare for new challenges.

Similarly, Omoleye, et al (2020) carried out a descriptive survey of all 150 Agricultural Science teachers in Ekiti State. Data were gathered using a 103-item questionnaire validated by experts, with an internal consistency reliability of 0.84. Analysis was carried out using the need-gap approach (difference between needed and possessed competency). Results revealed significant professional development needs in farm power and mechanization as well as agricultural economics and extension—both central to farm management. In a related study, Afolabi, et al, (2024) examined the in-service training programmes attended by secondary school Agricultural Science teachers in Kwara Central Senatorial District. The descriptive survey design was adopted to assess training types, organizers, and constraints. Findings revealed that seminars and workshops were the most common forms of professional development attended. These programmes were often organized by the Ministry of Education, Teaching Service Commission, Ministry of Agriculture and Natural Resources, and universities. Constraints included inadequate funding and lack of time for teachers to attend trainings.

This process gives a value called need gap. The need gap value indicates level of capacity building needs of teachers of agricultural science in the management of school farms in secondary schools in Ekiti State. Identifying and addressing these professional needs of Agricultural Science teachers is therefore crucial for improving the teaching and practice of farm management in schools.

A study conducted by Yusuf & Ogundele (2020) assessed the current skill levels of Agricultural Science teachers in Oyo State regarding core farm management areas. A survey research design was adopted. The population included 200 teachers. A sample of 120 was drawn using purposive sampling. The data collection instrument was a questionnaire, validated by experts, with a reliability coefficient of 0.81. Data were analyzed using descriptive statistics. The

study found that teachers demonstrated high competency in crop production planning but low competency in farm mechanization and marketing strategies. The study recommended refresher training. The study is similar to the current study in that both examined current skill level but differ in research design.

A study conducted by Okorie (2021) determined the specific farm management competencies lacking among Agricultural Science teachers in Abia State. The study employed a descriptive survey design. The population comprised 210 Agricultural Science teachers in public secondary schools. A sample of 120 teachers was selected using simple random sampling. The instrument was a structured questionnaire validated by experts and tested for reliability using Cronbach Alpha (r = 0.86). Data were analyzed using mean and standard deviation. Findings showed significant deficiencies in areas such as farm budgeting, pest control, and marketing of farm produce. Teachers reported limited exposure to practical budgeting and enterprise cost analysis. Both studies examined specific areas where teachers requires improvement and they both employed the same research design.

A study conducted by Ajibare, Ogunjobi & Olalekan (2025) assessed Secondary school agricultural science teachers' professional training, development and students' performance. The study adopted a descriptive survey research design. The population consisted of Agricultural Science teachers and students in selected secondary schools in Nigeria. A structured questionnaire was used for data collection. Data were analyzed using descriptive statistics and regression analysis. The study revealed that teachers with more years of experience and professional development demonstrated higher instructional competence and improved students' performance in Agricultural Science.

In another study, Ogunleye (2023) examined the role of professional development programmes in enhancing agricultural science teachers' competency in farm management. Descriptive survey research design was adopted. The population comprises of 200 Agricultural Science teachers in Ogun State, a sample of 140 teachers were selected using stratified random sampling. A well-Structured questionnaire titled Professional Development in Agriculture Questionnaire (PDAQ) was validated by experts with an internal consistency reliability of 0.85. Data were analyzed using Mean, standard deviation, and frequency counts. The findings indicated that Participation in workshops, seminars, and in-service training significantly improved teachers' knowledge and practical skills in farm management. Teachers reported that such programmes helped them adopt modern farming techniques, improved classroom supervision, and enhanced their confidence in handling school farm operations.

In a related study, Chukwuemeka (2022) assessed continuous professional development as a tool for enhancing agricultural science teachers' skills in farm management. Descriptive survey design was adopted for the study. Population of 180 teachers in Anambra State was employed. Sample of 120 teachers selected using purposive sampling. The instrument was validated by experts with an internal consistency reliability of 0.82. Data were Analyzed using mean and standard deviation. The study found out that continuous professional development programmes were found to

enhance both theoretical understanding and practical competence. Teachers who regularly attended training reported better supervisory skills, improved record-keeping practices, and effective planning of farm operations.

Research Methods

The descriptive research design of the survey type was adopted for this study. The population of this study consisted of the 248 Agricultural Science teachers in Senior Secondary Schools in Ekiti State. According to the [State Ministry of Education, 2024 data], there are approximately 607 Agricultural Science teachers across the public secondary schools Ekiti State

The sample for the study comprised 248 Teachers of Agricultural Science selected from public Secondary schools in rural and urban areas from the three Senatorial District of public Secondary School in Ekiti State using multi stage sampling procedures. Two self-designed instrument for teachers of Agricultural Science and Ministry of Education schools tagged Competency Needs Questionnaire. The validity of the instruments were ensured by presenting it to two experts from the Faculty of Agricultural Science, also the instruments were given to two experts each from Vocational and Technical Education, Test and Measurement all from Faculty of Education and the researcher's supervisor for proper scrutiny in Ekiti State University, Ado Ekiti. Based on their corrections, the instruments were restructured and the corrected versions were used for data collection. In order to ensure that the instruments used for this study was reliable, the researcher used Crobach's alpha to test the internal consistency of the instruments. The instruments (QCNASYFM) were administered on 20 Agricultural Science teachers outside the sampled schools. The result yielded 0.77. The researcher sought the permission of the Principals of the selected schools before the distribution of the copies of questionnaire to the Agricultural Science teachers. Agricultural Science teachers in the sampled schools were given necessary orientations as to the purpose of the research instruments, and copies of the questionnaire were administered by the researcher together with the two trained research assistance in the secondary schools. The data was analyzed using descriptive and inferential statistics. All the research questions raised were answered using descriptive statistics such as frequency counts, mean, standard deviations and percentages. Any mean that is above 2.50 will be regarded as agreed, while mean below 2.50 will be regarded as not agreed. Inferential statistics Analysis of Variance (ANOVA) was used to test hypotheses 1 while Pearson's Products Moments Correlation. (PPMC) was used to test the hypotheses 2. All the hypotheses were tested at 0.05 level of significant.

Results and Discussions

Research Question1:

What are the current levels of competency in farm management among Agricultural Science teachers in secondary schools?

Table 1: Descriptive Analysis of the current levels of competency in farm management among Agricultural Science teachers in secondary schools

SN	Item	M	SD	Remark
1	Possess ability in planning school farm operations.	2.98	0.82	High
2	Possess ability to supervise students during practical farm activities.	3.19	1.18	High
3	Understand and apply principles of farm budgeting and record keeping.	2.98	0.82	High
4	Capable of diagnosing and solving problems that arise on the school farm.	3.19	0.66	High
5	Adequate knowledge of crop production management.	2.79	0.51	High
6	Confident in handling livestock management tasks on the school farm.	1.98	0.82	Low
7	I can manage school farm resources efficiently.	3.34	0.48	High
8	Ability to use check listing technique to assess students acquired skills	3.66	0.48	High

Cut -Off Mean; 2.50 Grand Mean: 3.01

Table 1 shows that the x scores ranges from 1.98 – 3.66 above the parameter $\bar{x}$ score of 2.50. All the items in the scale except item 8 had their mean score above the cut off mean of the scale considering the Grand mean (3.01) of the scale and the mean cut off of the scale. It could be said that the level of competency of teachers of agricultural science in farm management is moderately high.

Research Question 2:
What specific areas of farm management do Agricultural Science teachers identify as needing improvement?

Table 2: Descriptive Analysis of the specific areas of farm management to which Agricultural Science teachers identify as needing improvement (N=248)

SN	Item	M	SD	Remark
1	Ability to prepare and manage a farm budget	1.87	0.79	**Not Needed**
2	Knowledge of soil preparation and fertility management techniques	3.66	0.48	**Needed**
3	Skills in crop rotation and soil conservation	3.00	0.00	**Needed**
4	Pest and disease identification and control on the school farm	3.65	0.48	**Needed**
5	Record keeping and farm documentation practices	2.69	0.96	**Needed**
6	Management of agricultural tools and equipment	3.31	0.95	**Needed**
7	Marketing and sale of farm produce	.02	0.82	**Needed**
8	Supervision and coordination of student practical activities	2.00	0.81	**Needed**

Cut -Off Mean; 2.5

Table 2 shows that the $\bar{x}$ scores ranges from 1.87 – 3.66 above the parameter $\bar{x}$ score of 2.50. while the mean scores of 1.87 and 2.00 below the parameter Cut-Off Mean scores of 2.50. This indicates that majority of the respondents agreed on the criteria of the Perception on the specific areas of farm

management to which Agricultural Science teachers identify as needing improvement. Item 2 (Knowledge of soil preparation and fertility management techniques) has the highest $\bar{x}$ score of 3.66 while item 1 has the lowest $\bar{x}$ score of 1.87 (Ability to prepare and manage a farm budget)

Research Question 3

How do teachers' experience influence competency in farm management?

Table 4: Frequency and percentage of the influence of teachers' experience on competency in farm management

S/N	Item	Agree		Disagree	
		Freq	%	Freq	%
1	Teachers' years of experience contribute to effective management of school farms.	243	97.98	5	2.02
2	Teachers with more teaching experience are more capable of guiding students during farm practical activities.	228	91.94	20	8.06
3	Experience in teaching Agricultural Science improves teachers' decision-making in farm management practices.	240	96.77	8	3.23
4	Teachers who have acquired more experience are more competent in planning farm activities and record keeping.	238	95.97	10	4.03
	Teachers' experience enhances their ability to supervise students during farm operations.	215	86.69	33	13.31
	Experience helps teachers to apply appropriate farming techniques in school farms.	218	87.90	30	12.10
	Experienced Agricultural Science teachers are better at organizing and coordinating farm activities.	223	89.92	25	10.08

Table 3 shows the frequency and percentage of influence of teachers experience on competency in farm management. The responses of the teacher were collapsed to agree and disagree for easy interpretation. 243(97.98%) of the respondents agreed that teachers' years of experience contribute to effective management of school farms, showing a strong consensus on the importance of experience in overall farm administration. While, 240 (96.77%) of the respondents agreed that teaching experience improves decision-making in farm management. Also, 238(95.97%) of the respondents agreed that experienced teachers are more competent in planning farm activities and record keeping, while, 228 (91.94%) of the respondents agreed that experienced teachers are more capable of guiding students during farm practical activities. Also. 223 (89.92%) of the respondents agreed that experienced teachers are better at organizing and coordinating farm activities.

The findings clearly indicate that teachers' experience has a strong positive influence on competency in farm management. Across all items, agreement levels are consistently high (above 86%), suggesting that experience

is a key factor in improving practical skills, decision-making, supervision, and overall effectiveness in Agricultural Science teaching.

Research Question 4

What professional development programmes exist for improving teachers' farm management skills?

Table 3: Frequency and percentage of professional programmes for improving teachers farm management skills.

S/N	Item	Agree		Disagree	
		Freq	%	Freq	%
I	I have attended workshops on modern farm management in the last two years.	108	43.54	140	56.45
2	There are limited professional development opportunities in agricultural education.	82	33.06	166	66.93
3	I am aware of government-sponsored training programs for teachers.	81	33.66	167	67.33
4	I need regular training to stay updated with modern farm techniques	166	66.93	82	33.06
5	In-service training helps me improve my farm management skills.	144	58.06	104	41.93
6	Teachers' capacity-building programs are relevant and effective.	130	52.41	118	47.58
7	There are collaboration programs with local agricultural agencies for teacher development.	120	48.38	128	51.61

Table 4 shows the frequency and percentage of professional programmes for improving teachers farm management skills. The responses of the teacher were collapsed to agree and disagree for easy interpretation. 166 (66.93%) of the respondents agreed that they need regular training to stay updated with modern farm techniques, while 144 (58.06%) of the respondents agreed that in-service training helps improve farm management skills. Also, 130 respondents (52.41%) agreed that teachers' capacity-building programmes are relevant and effective.

Testing of Hypotheses

Hypothesis one

H_{O1}: There is no significant difference between teachers' teaching experience and their competency in farm management.

In testing the hypothesis, scores were obtained from bio data information of section A and items 1-48 of section B Competency Capacity Building Needs of Agricultural science Teachers in Management of School Farm for skill acquisition among Secondary School Students in Ekiti State. These scores were subsequently subjected to statistical analysis involving Analysis of Variance. The result is shown in Table 8.

Table 5: ANOVA on difference between teachers' teaching experience and their competency in farm management.

	Sum of Squares	df	Mean Square	F	P value	Remark
Between Groups	1163.43	6	193.91	2.01	2.34	**Not Significant**
Within Groups	4051.00	42	96.45			
Total	5214.43	48				

p > 0.05

Table 8 shows the difference between groups and within groups as 6 and 42 respectively. The F cal = 2.01, P value = 2.34 at 0.05 level of significance. Therefore, since P value > 0.05 the Null hypothesis is accepted, this implies that there is no significant difference between teachers' teaching experience and their competency in farm management.

Hypothesis Three

$H_{O1:}$ There is no significant relationship between Training and professional development opportunities programs and their competency in farm management.

In testing the hypothesis, scores relating to different Training and professional development opportunities programs were computed using items 1-48 of section B of and their competency in farm management. These scores were subsequently subjected to statistical analysis involving Pearson's Products Moments Correlation. The result is presented in Table 13.

Table 6: Pearson's Products Moments Correlation of Training and professional development opportunities programs and their competency in farm management. (N=248)

VARIABLE	$\bar{x}$	SD	r	P value	Remark
professional development opportunities programs	24.62	1.90	0.62	<0.001	**Significant.**
competency in farm management	154.92	10.02			

P < 0.05

Table 6 shows that r-cal = 0.62 and P value = <0.001 at 0.05 level of significance. Therefore, since P value < 0.05, the Null hypothesis is not accepted, this implies that there is significant relationship professional development programs and their competency in farm management.

Discussion

The finding of the study reveals that teachers' experience significantly influences competency in Agricultural Science, particularly in farm management in secondary schools. Supporting this findings, Adebayo & Ilesanmi (2015) reveals that experienced teachers were better at providing students with practical skills related to farm management, The findings of the study equally revealed that there is relationship professional development opportunities programs and their competency in farm management. This is in line with Afolabi et al (2024) who explored the training opportunities available for Agricultural Science teachers to improve their farm management skills and assessed the in-service training programmes attended by secondary school Agricultural Science teachers in Kwara Central Senatorial District, Nigeria. It was found out from the study that the teachers who participated in these programs felt more competent in managing school farms, especially in areas like crop planning, pest control, and record keeping. In a similar study, Omoleye, et al (2020) investigated the Competency improvement needs of Agricultural Science teachers for effective teaching, availability and impact of professional development programs aimed at improving Agricultural Science teachers' farm management skills in Ekiti State, Nigeria. The study found that: the teachers who participated in training programs reported increased confidence

in managing school farms and applying modern farming techniques.

Conclusion and Recommendations

Based on the findings of this study, it could be concluded that there is a significant relationship between participation in training and professional development opportunities and teachers' competency in farm management. This indicates that while formal education and experience alone may not enhance competency, targeted training and professional development programs play a crucial role in improving teachers' skills and effectiveness in farm management.

Recommendations

Based on the findings of this study, it was recommended that:

1. Education stakeholders should organize regular, hands-on training and workshops specifically focused on farm management practices to enhance teachers' practical skills and competence.
2. Government should design professional development programs tailored to address current gaps in farm management competency, incorporating real-life scenarios, case studies, and modern agricultural techniques.
3. Schools and agricultural education departments should encourage teachers to pursue continuous learning through short courses, certifications, and seminars related to farm management, regardless of their academic qualifications.
4. Government should include regular practical farm-based activities and community farm engagement as part of teachers' professional development to bridge the gap between theory and practice.

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