

TRAINING NEEDS OF TEACHERS IN FISHERY SUBJECT IN SECONDARY SCHOOLS FOR FOOD SECURITY IN IKA NORTH-EAST L.G.A DELTA STATE

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Abstract

The study investigated the training needs of teachers in fishery subject in secondary schools for food security in Ika North-East Local Government Area Delta state, four research questions were used to conduct the research. It was guided by the Human capital theory and Borich model. A descriptive survey method was adopted for the study. The population of the study comprised of 79 Agricultural science teachers in public schools in Ika North East. A well-structured questionnaire titled “Training Needs of Agricultural Science Teachers Questionnaire (TNASTQ)” was developed and used to elicit relevant data for the study. The instrument was face validated by three experts, and Split-half reliability method was used to determine the reliability of the instrument. Data collected from respondents were analyzed with frequencies, simple percentages, Means and Standard Deviations (SD) and Mean ($\bar{x}$) Weighted Discrepancy Scores (MWDS). The findings revealed the training needs of Agricultural science teachers to effectively teach fishery in schools, furthermore the pedagogical, supervision and evaluation improvement needs were abilities to; create a learning environment that will enable students meet their targeted learning outcome; conduct periodic reviews with students to confirm their grasp of learning material; choose evaluation methods appropriate for instructional decisions and develop methods appropriate for instructional decisions among others. Workshops, seminars, staff meetings, in-service training and ICT training were identified as the available programmes to build the competencies of Agricultural science teachers in Ika North East L.G.A. It was recommended amongst others that efforts should be made by the government and policy makers to organize capacity-building training programmes such as in-service training, workshop, to improve the competencies of Agricultural science instructors for effective implementation and development of the fishery trade subject for food security in Ika North East L.G.A

Keywords: Fishery, Food Security, Training Needs, Agricultural science Teachers,

Introduction

The world food problem is one of the greatest challenges of mankind. Achieving food security is a significant and growing challenge in the developing world and highly critical to alleviating poverty. Global food security remains a persistent challenge, with malnutrition affecting a significant portion of the world's population (Bennett et al., 2021, p. 981).

Escalante and García (2023) emphasized that food security is a pressing issue requiring a multifaceted approach, where education in vocational areas like fishery is critical for practical skills in food production. A direct link exists between agricultural education and food supply, as

graduates play a crucial role in addressing sustainable production challenges and supporting, providing services and opportunities to rural populations (FAO, 2014). The importance of Agricultural education is underscored by various studies, including those by Longshal (2010) and the World Bank (2013), World Food Programme (WFP, 2014) highlighting its necessity for empowering the poor and ensuring food security. Agricultural education is vital for sustainable development and food security, equipping individuals with necessary skills to improve agricultural productivity.

Recent advances in education system, particularly in vocational education include the addition of 34 new trades' subjects, such as Animal Husbandry and Fisheries to enhance Agricultural Science curriculum. This shift aims to equip secondary school graduates with practical trade and entrepreneurship skills essential for poverty alleviation, job and wealth creation, emphasizing the importance of training future entrepreneurs in agriculture.

Fishery according to Adamu (2017) is a branch of agriculture which is responsible for raising fish and other aquatic species. Fish farming (culture) is the act of rearing selected species of fish under scientifically controlled conditions in enclosed bodies of water such as ponds, streams, and rivers, where they feed, grow, breed, and are harvested for consumption or sale. (Obembe, cited in Ozor & Ikeoji 2024). Fisheries denote the practice of enhancing fish production through some type of rearing process intervention, such as regular stocking, feeding, predator protection, etc. Fish farming also denotes that the fish breed being raised is owned by a person or organization (Olaoye, 2019).

Food security is a condition related to the supply of food, and individuals' access to it. Similarly, Abubakar (2013) defined food security as a situation that only exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs for an active and healthy life. Food security is also a condition in which all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life (Food and Agriculture Organization, 2006). This concept aligns with Ekong (2024) who describes it as a situation of having reliable access to sufficient quantity affordable and sustained food supply. Food security is recorded when citizens all the time have physical and economic access to sufficient, safe and nutritious food to satisfy dietary needs and preferences to support healthy and active livelihood. Within agricultural education, therefore, food security is not only an outcome but also a goal of capacity building, where education serves as a tool to develop competencies needed to achieve sustainable food systems and improved livelihoods. (FAO 2017; Ekong 2024)

FAO report clarifies that “lack of education undermines productivity, employability and earning capacity, leading directly to poverty and hunger”. (FAO cited in Abubakar, 2013). Agricultural Science teachers are charged with the responsibility of teaching both Agricultural Science along with the agriculture-based trade subjects in secondary schools. This is because Olaitan, et al, (2010) believed that Agricultural Science teachers are individuals trained in the pedagogical and technical areas of Agricultural Science and charged with the responsibility of imparting knowledge, skills and attitudes to students. Thus, the recent changes in the Agricultural Science curriculum coupled with the two trade subjects which the Agricultural Science teachers are charged to teach in secondary schools calls for training and retraining of the Agricultural Science teachers in Ika North East, L.G.A of Delta State.

The term "training need" which is often used interchangeably with "capacity-building need." is the effort geared towards improving the level of knowledge, skills and attitude possessed by an individual for proficiency in a given task or job. (Olaitan, et al (2009). Training need in the context of this study refers to improving the level of knowledge, skills and attitude possessed by Agricultural Science teachers to enhance skill acquisition among secondary school students for food security in Ika North East of Delta State. According to Olaitan, *et al.* (2010), they are expected to possess relevant skills in, teaching, supervision and evaluation that will aid them in providing students with relevant skills needed for food production after graduation, so as to eliminate the problem of unemployment and other social vices in the society and enhance food security.

Although multiple factors influence sustainable development and food security, the development of human capacity through agricultural education remains a key driver in promoting innovation, improving farming practices, and strengthening food systems (Food and Agriculture Organization, 2017; United Nations Educational, Scientific and Cultural Organization, 2014).

Ng and Smith (2004) believed that no matter how good the policies of an educational programme appear; its effective implementation lies on the teachers. They also need to possess adequate knowledge and training skills in diverse teaching skills capable of promoting the teaching learning process, supervision skills to aid supervision of practical agriculture, and evaluation skills to evaluate students' activities in both classroom activities and practical agriculture, since the aim of teaching Vocational Agriculture in secondary schools is to inculcate entrepreneurial skills in the students. Hence; certain questions seem unanswered. Do Agricultural Science teachers require training to help close the gap of capacity deficiencies in their pedagogical, supervision and evaluation skills? Are they willing to participate in capacity-

building training programmes to improve their skills in teaching fishery in senior secondary schools for food security in Ika North-East L.G.A, Delta State?

It is against this background that this study seeks to determine the training needs of Agricultural Science teachers for Fishery subject in secondary schools, for food security in Ika North-East LGA, Delta State.

Purpose of the Study

The main purpose of the study is to determine the training needs of teachers for Fishery subject in secondary schools for food security in Ika North-East L.G.A, Delta State. Specific objectives include to determine training needs:

- i. of secondary school Agricultural Science teachers in pedagogical skills for teaching Fishery in Ika North East LGA.
- ii. of secondary school Agricultural Science teachers in supervision skills for teaching Fishery in Ika North East LGA.
- iii. of secondary school Agricultural Science teachers in evaluation skills for teaching Fishery in Ika North East LGA
- iv. programmes that can help to build the competencies of Agricultural Science teachers to teach Fisheries in Ika North East L,G,A

Methodology

Four research questions guided the study. This study adopted a descriptive survey method. The instrument for data collection was a well-structured questionnaire titled “Training Needs of Agricultural Science Teachers Questionnaire (TNASTQ),” developed and used to elicit relevant data for the study. The instrument was face validated by three experts in Agricultural Education and Measurement and Evaluation department in the University of Delta, Agbor.

The questionnaires were administered with the help of four (4) research assistants. They were given a total of Seventy-nine (79) copies of questionnaire to distribute to Agricultural Science teachers within Ika North East LGA, Delta state. 72 copies were retrieved, which represents a return rate of 91%. The statistical instruments adopted for data analyses SPSS, Version 25 were frequencies, simple percentages, Mean ($\bar{x}$) and Standard Deviations (SD) and Mean ($\bar{x}$) Weighted Discrepancy Scores (MWDS). The research questions (i) to (iii) were analyzed with the MWDS, they were calculated by multiplying the discrepancy score by the mean ($\bar{x}$) importance rating. Items were prioritized according to their MWDS in such a way that the highest needs came first in a descending order. Research question (iv) was analyzed with

mean ($\bar{x}$) and standard deviation. The benchmark for accepting and rejecting the items that falls in this research questions was set at 2.50; such that any item with mean ($\bar{x}$) score of 2.50 and above was regarded as Training programmes available for Agricultural Science teachers in Ika N. E, while those less than 2.50 were regarded as otherwise

Results

Table 1: Demographic Variables of Agricultural Science Teachers in Ika N.E L.G.A (n = 72)

Variables	Frequency (F)	Percentages (%)
Sex		
Male	48	66.7
Female	24	33.3
Total	72	100
Education Qualifications		
MSc.(Ed.)	3	4.2
BSc.(Ed)	59	82
HND	2	2.8
OND	Nil	0
NCE	8	11
Total	72	100
Teaching Experience:		
0-5yrs	19	26.4
6-10yrs	29	40.3
11-15yrs	8	11.1
16-20yrs	10	13.9
21yrs and above	6	8.3
Total	72	100
Location		
Rural	51	70.8
Urban	21	29.2
Total	72	100

Source: Field Work (2025)

Table 2: Mean ($\bar{x}$) and Standard Deviation Scores on the training needs of teachers in pedagogical skills for teaching Fishery in Ika North East LGA (n = 72)

S/N	Training Needs of Teachers	$\bar{X}_1$	$\bar{X}_2$	$D(\bar{X}_1 - \bar{X}_2)$	MWDS ($\bar{X}_1 \times D$)	Remark	Rank
1	Ability to: to create a learning environment will enable students meet their targeted learning outcomes	4.83	2.99	1.84	8.89	T N	1 st
2	know your students – not just academically, but also their personality	4.84	3.26	1.58	7.65	T N	2 nd
3	to be able to create a learning environment that is challenging, open, engaging, rich, as well as being maintaining the interest and motivation of students	4.66	3.23	1.43	6.66	T N	3 rd
4	be consistent/equitable in your negotiation of expectations	3.97	2.58	1.39	5.52	T N	4 th
5	Identify the methods that works or those that doesn't work in teaching your students	4.25	3.07	1.18	5.02	T N	5 th
6	to provide stability/structure in the cultural aspects of your classroom	3.86	2.57	1.29	4.98	T N	6 th
7	make your students aware of your expectations	3.28	3.28	0.00	0.00	TNN	7 th
8	to provide stability/structure in the academic aspects of your classroom	4.31	4.31	0.00	.0.00	TNN	8 th
9	reflect on your teaching practices	3.53	3.54	-0.01	-0.03	TNN	9 th
10	inform students of the consequences for inappropriate behaviour while teaching	3.28	3.41	-0.13	-0.43	TNN	10 th

Key: $\bar{X}_1$ =Importance ratings, $\bar{X}_2$ = Possession rating, D = Discrepancy ($\bar{X}_1 - \bar{X}_2$), MWDS = Mean Weighted Discrepancy

Score, TN= Training Needed, TNN=Training Not Needed

Source: Field Work (2025)

Table 2 revealed the MWDS of the training needs of teachers in pedagogical skills for teaching Fishery in Ika North East L.G.A Table 2 revealed that 6 out of the 10 abilities or tasks, had

positive MWDS which ranged from 8.89 to 4.98, implying that the Agricultural science teachers have higher need for training. The six (6) abilities were; to create a learning environment will enable students meet their targeted learning outcomes (8.89); know your students – not just academically, but also their personality (7.65); to be able to create a learning environment that is challenging, open, engaging, rich, as well as being maintaining the interest and motivation of students (6.66); be consistent/equitable in your negotiation of expectations (5.52); Identify the methods that works or those that doesn't work in teaching your students (5.02); to provide stability/structure in the cultural aspects of your classroom (4.98)

However, the remaining 4 out of the 10 abilities, had zero and negative MWDS which implies that Agricultural science teachers have no need for further training. They include; make your students aware of your expectations (0.00); to provide stability/structure in the academic aspects of your classroom (0.00); reflect on your teaching practices (-0.03); inform students of the consequences for inappropriate behaviour while teaching (-0.43)

Table 3: Mean ($\bar{x}$) and Standard Deviation Scores on the training needs of teachers in supervision skills for teaching Fishery in Ika North East LGA (n = 72)

S/N	Training Needs of Teachers	$\bar{X}_1$	$\bar{X}_2$	$D(\bar{X}_1 - \bar{X}_2)$	MWDS $(\bar{X}_1 \times D)$	Remark	Rank
1	Conduct periodic reviews with students to confirm their grasp of learning material	4.84	2.99	1.85	8.95	TN	1 st
2	Question students during classroom discussions to check their understanding of the material being taught	4.84	3.26	1.58	7.65	TN	2 nd
3	Circulate around the classroom during seatwork and engaging in one-to-one contacts with students about their work	4.66	3.23	1.43	6.66	TN	3 rd
4	Record completion and grades of students' homework	3.97	2.58	1.39	5.52	TN	4 th
5	Make corrections on homework assigned to students	4.25	3.07	1.18	5.02	TN	5 th
6	Assigning homework/farm project to students	3.86	2.57	1.29	4.98	TN	6 th
7	Identify gaps in students' knowledge and understanding	4.52	3.48	1.04	4.70	TN	7 th

8	Review student performance data collected	2.68	2.67	0.01	0.03	TN	8 th
9	Administer/correct tests/record test scores	3.31	3.31	0.00	0.00	TNN	9 th
10	Collect homework from students at the stipulated time	3.46	4.17	0.71	-2.46	TNN	10 th

Key: $\bar{X}_1$ =Importance ratings, $\bar{X}_2$ = Possession rating, D = Discrepancy ($\bar{X}_1 - \bar{X}_2$), MWDS = Mean Weighted Discrepancy

Score, TN= Training Needed, TNN=Training Not Needed

Source: Field Work (2025)

Table 3 revealed the MWDS of the training needs of teachers in supervision skills for teaching Fishery in Ika North East L.G.A Table 3 revealed that 8 out of the 10 abilities, had positive MWDS which ranged from 8.95 to 0.03, implying that the Agricultural science teachers have higher need for training. The eight (8) abilities were; Conduct periodic reviews with students to confirm their grasp of learning material (8.95); Question students during classroom discussions to check their understanding of the material being taught (7.65); Circulate around the classroom during seatwork and engaging in one-to-one contacts with students about their work (6.66); Record completion and grades of students' homework (5.52); Make corrections on homework assigned to students (5.02); Assigning homework/farm project to students identify gaps in students' knowledge and understanding (4.98); identify gaps in students' knowledge and understanding (4.70); Review student performance data collected (0.03).

However, the remaining 2 out of the 10 abilities, had zero and negative MWDS which implies that Agricultural science teachers have no need for further training. They include; Administer/correct tests/record test scores (0.00); Collect homework from students at the stipulated time (-2.46)

Table 4: Mean ($\bar{x}$) and Standard Deviation Scores on the training needs of teachers in evaluation skills for teaching Fishery in Ika North East LGA (n = 72)

S/N	Training Needs of Teachers	$\bar{X}_1$	$\bar{X}_2$	$D(\bar{X}_1 - \bar{X}_2)$	MWDS ($\bar{X}_1 \times D$)	Remark	Rank
1	Choose evaluation methods appropriate for instructional decisions	3.85	3.11	0.74	2.85	TN	1 st
2	Develop methods appropriate for instructional decisions	4.53	3.97	0.56	2.54	TN	2 nd
3	Administer/score/interpret the results of both externally produced and	3.27	2.59	0.68	2.22	TN	3 rd

4	teacher-produced evaluation methods Use evaluation results when making decisions about individual students	4.08	3.55	0.53	2.16	TN	4 th
5	Evaluate the psychomotor domain of students' learning	3.76	3.26	0.5	1.88	TN	5 th
6	Use evaluation results when making decisions about developing curriculum	3.55	3.24	0.31	1.10	TN	6 th
7	Use evaluation results when making decisions about school improvement	3.22	3.00	0.22	0.71	TN	7 th
8	Recognize other inappropriate evaluation methods	3.07	3.07	0.00	0.00	TNN	8 th
9	Use evaluation results when making decisions about planning teaching	3.53	3.54	0.01	-0.04	TNN	9 th
10	Evaluate the affective domain of students' learning	3.28	3.41	-0.13	-0.43	TNN	10 th

Key: $\bar{X}_1$ =Importance ratings, $\bar{X}_2$ = Possession rating, $D = \text{Discrepancy}(\bar{X}_1 - \bar{X}_2)$, MWDS = Mean Weighted Discrepancy Score,

TN= Training Needed, TNN=Training Not Needed

Source: Field Work (2025)

Table 4 revealed the MWDS of the training needs of teachers in evaluation skills for teaching Fishery in Ika North East L.G.A Table 4 showed that 7 out of the 10 abilities, had positive MWDS which ranged from 2.85 to 0.71, implying that the Agricultural science teachers have higher need for training. The seven (7) abilities were; Choose evaluation methods appropriate for instructional decisions (2.85); Develop methods appropriate for instructional decisions (2.54); Administer/score/interpret the results of both externally produced and teacher-produced evaluation methods (2.22); Use evaluation results when making decisions about individual students (2.16); Evaluate the psychomotor domain of students' learning (1.88); Use evaluation results when making decisions about developing curriculum (1.10); Use evaluation results when making decisions about school improvement (0.71);

However, the remaining 3 out of the 10 abilities, had zero and negative MWDS which implies that Agricultural science teachers have no need for further training. They include; recognize other inappropriate evaluation methods (0.00); Use evaluation results when making

decisions about planning teaching (-0.04); Evaluate the affective domain of students' learning (-0.43).

Table 5: Mean ($\bar{x}$) and Standard Deviation Scores on available capacity-building programmes to build competencies of teachers to teach Fishery in schools in Ika North East LGA (n = 72)

S/N	Capacity-Building Programmes	Mean ($\bar{x}$)	SD	Remark
1	In-service training programmes	3.02	0.794	Available
2	Conferences	2.44	1.063	Not Available
3	Workshops	3.70	0.458	Available
4	Seminars	3.52	0.501	Available
5	ICT training	2.65	1.141	Available
6	Staff meetings	2.66	1.171	Available
	Grand Mean ($\bar{x}$)	3.00	0.855	Available

Source: Field Work (2025)

Table 5 showed the available capacity-building programmes to build competencies of teachers to teach Fishery in schools in Ika North East LGA. Item 1 to 6 had a grand mean ($\bar{x}$) score of 3.00, and a standard deviation of 0.855, which is above the cut-off mean ($\bar{x}$) of 2.50. Table 5 also showed that 5 items had mean ($\bar{x}$) values greater than the cut-off mean ($\bar{x}$) of 2.50, while 1 item had mean ($\bar{x}$) scores less than 2.50. The result indicates the available capacity-building programmes to build competencies of teachers to teach Fishery in schools in Ika North East LGA

Table 5 showed that 6 item had mean ($\bar{x}$) values greater than the cut-off mean ($\bar{x}$) of 2.50, which indicates the available capacity-building programmes to build competencies of teachers to teach Fishery in schools in Ika North East LGA. High mean ($\bar{x}$) scores were recorded for items; 3 (Workshops, 3.70), 4 (Seminars, 3.52), 1 (In-service training, 3.02), 6 (Staff meetings, 2.66) and item 5 (ICT Training, 2.65).

However, 1 item had mean ($\bar{x}$) scores less than 2.50, indicating the unavailable capacity-building programmes to build competencies of teachers to teach Fishery in schools in Ika North East LGA. The item; 7 (Conference, 2.44).

Discussion of Findings

The Socio-Economic Characteristic of Agricultural Science Teachers

The results from Table 1 revealed that majority of Agricultural science teachers are male (66.7%) than females (33.3%). This agrees with Ogunlela and Mukhtar (2009), who stated that there are considerably more male teachers in agricultural science, reflecting broader gender inequalities in science education and the agricultural workforce. Also UNESCO (2019), reported that field like agricultural science, the gender gap among teachers remains high, with men significantly outnumbering women.

The result from Table 1 also showed that majority (82%) of respondents had attained BSc (Ed) in Agricultural education. This implies that majority of teachers in secondary schools have attained BSc (Ed) in Agricultural education. The result also shows that majority of respondents had 6-10 years of teaching experience, on the average, the Agricultural science teachers have been into teaching for 8 years, this implies that majority have experience in teaching fishery. As revealed by **Osinem & Nwoji (2010)**, majority of agricultural science teachers in Nigeria are graduates of agricultural education or agricultural science, in line with teacher education standards and curriculum demands. The result obtained also revealed that majority (70.8%) of Agricultural science teachers teach in rural areas. Just as it is revealed in the list of schools in Ika North East L.G.A in Delta State. (Zonal office, Post-Primary Education Board, Owa Oyibu, 2024),

Training Needs of Agricultural Science Teachers in Pedagogical Skills

The findings from Table 2 revealed that out of the 10 abilities, 6 abilities had positive MWDS, which implies that they have higher need for improvement in training programmes, The six (6) abilities with the highest need include: to create a learning environment that will enable students meet their targeted learning outcomes, know your students – not just academically, but also their personality; to be able to create a learning environment that is challenging, open, engaging, rich, as well as maintaining the interest and motivation of students; among others. The findings are similar to the report of Ajayi and Ogunyemi (2011), who stated that Agricultural science teachers need continuous professional development in pedagogical skills, particularly in lesson delivery, classroom management, and learner-centered approaches. Also, UNESCO (2016), reported that "Improving the pedagogical skills of vocational and agricultural educators is critical to enhancing student outcomes, especially in developing countries."

Training Needs of Agricultural Science Teachers in Supervision Skills

The findings from Table 3 revealed that out of the 10 abilities, 7 abilities had positive MWDS, which implies that they have higher need for improvement training programmes. The eight (8) abilities were; Conduct periodic reviews with students to confirm their grasp of learning material; Question students during classroom discussions to check their understanding of the material being taught; Circulate around the classroom during seatwork and engaging in one-to-one contacts with students about their work to mention a few. This implies that agricultural science teachers need improvement training programmes in supervision skills. This is in line with the study of **Egun (2007)** who stated that training in farm supervision skill is essential to address the observed weaknesses among agricultural science teachers in managing practical lessons." There is a significant gap in the ability of agricultural science teachers to supervise practical work and farm operations effectively due to insufficient training in supervision skills (Ajayi & Afolayan, 2009).

Training Needs of Agricultural Science Teachers in Evaluation Skills

The findings from Table 3 revealed that out of the 10 abilities, 7 abilities had positive MWDS, which implies that they have higher need for improvement training programmes. The seven (7) abilities were; Choose evaluation methods appropriate for instructional decisions, Develop methods appropriate for instructional decisions, Administer/score/interpret the results of both externally produced and teacher-produced evaluation methods among others. This finding is consonance with the study of **Osinem and Nwoji (2010)** who opined that most agricultural science teachers do not possess adequate skills in evaluating students' psychomotor and cognitive abilities. There is a pressing need for in-service training in assessment practices. Also **Egun (2007)** reported that teachers lack skills in evaluating the practical components of agriculture. This gap undermines students' vocational preparedness and calls for retraining in comprehensive evaluation methods.

Training Need Programmes Available for Agricultural Science Teachers

The findings from Table 5 generally revealed the available training programmes to build agricultural science teachers' competencies. The training programmes are workshops, seminars, staff meetings, in-service training and ICT training. The training programmes from the findings are also similar with **Konyango and Asienyo (2015)** who reported that Agricultural education teachers expressed a high need for in-service training in curriculum implementation and learner assessment techniques."

Conclusion

Based on the findings of the study, it was concluded that agricultural science teachers desire improvement training on some pedagogical abilities such as; to create learning environment that will enable students meet their targeted learning outcomes, among others.

The improvement needs in supervision skill such as; conduct periodic reviews with students to confirm their grasp of learning material; to mention a few. The improvement needs in evaluation skill such as; choose evaluation methods appropriate for instructional decisions, develop methods appropriate for instructional decisions, administer/score/interpret the results of both externally produced and teacher-produced evaluation methods among others. Workshops, seminars, staff meetings, in-service training and ICT training are available programmes to build the competencies of agricultural science teachers in Ika North East L.G.A.

Recommendations

The following recommendations were made from the research findings:

1. The Government and relevant stakeholders such as the Ministry of Education, educational administrator, policy makers, among others should organize capacity-building training programmes to improve the competencies of agricultural science instructors for effective implementation and development of the fishery trade subject and food security.
2. Organize regular in-service training on learner-centered teaching methods, classroom management, differentiated instruction, and the integration of theory with practical activities.
3. Train teachers on supervision strategies for school farms, laboratory work, and field excursions—including safety protocols and student monitoring techniques
4. Develop teachers' capacity to assess cognitive, affective, and psychomotor domains using tools such as rubrics, checklists, and practical tests.

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