PERCEPTION OF INDUSTRY MANAGERS' ROLES AS PARTNER IN THE FISHERY TRADE CURRICULUM FOR SKILLS ACQUISITION IN DELTA STATE SECONDARY SCHOOLS

Ozor Roland Ndudi & Canice N. Ikeoji, (Professor)
Department of Vocational & Technical Education, University of Delta, Agbor, Nigeria.
roland.ozor@unidel.edu.ng

Abstract

The study ascertained the perception of industry managers' roles as partners in the fishery trade curriculum for skill acquisition in delta state secondary schools. The study was guided by three research questions. The purpose of the study was to determine the level of partnership existing between industry managers and Delta State secondary schools among others. The Ex-Post Facto Research Design was adopted, using survey method. The population of the study comprised of 848 Fish farmers in Delta State, of which a sample size of 265 was selected using Proportionate Stratified Random Sampling Technique. A well-structured questionnaire titled "Perception of Industry Managers' Roles as Partners in the Fishery Trade Curriculum Questionnaire (PIMRPFTCQ)" was developed and used to collect relevant data for the study. The instrument was face validated by three experts. Split-half reliability method was used to determine the reliability of the instrument, and a Spearman Brown Coefficient of 0.72 signifying that the instrument is adequate and reliable for the study. Data collected from respondents were analyzed with frequencies, simple percentages, Means ($\bar{x}$) and Standard Deviations (SD) in an SPSS, Version 23, The findings revealed that Industry managers have negative perception of their roles as partners in the Fishery curriculum. It was recommended amongst others that effort should be made by the government and policy makers to deploy extension agents knowledgeable in fishery to create awareness and sensitization exercise on principles or policies that justifies farmers to actively play their role as partners in the fishery trade curriculum.

Keywords: Perception, Industry managers, Partners, Skill Acquisition, Fishery curriculum

Introduction

Fishery is defined as an organized activity or industrial engagement in the catching, processing, and marketing of fish, shellfish and other aquatic organisms. Fishery according to Adamu (2017) is a branch of Agriculture and it 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, rivers, etc. where they feed, grow, breed, and are harvested for consumption or sale (Van & Kraan 2018).

The human diet includes fish as an essential ingredient. It includes vitamins, minerals, proteins, carbohydrates, and lipids (Oboyano 2017; Amaju 2018). In the words of Simeon, Diallo, and Samara, referenced in Ogwu *et al. (*2021) fish is highly prized since it has the highest proportion of metabolizable protein, a good amount of carbs, lipids, vitamins, and minerals. Supporting this view, Oboyano (2017) asserted that fish is a cost-effective source of protein for Nigerians, and the most widely consumed imported species include croaker, herring, mackerel, and catfish.

According to the Food and Agriculture Organization (FAO) (2020), fish accounts for more than 60% of the world's supply of animal protein, particularly in developing nations. Nigeria spends 625 million USD approximately 100 billion naira on fish imports, according to the (United States Agency for International Development 2018 & National Bureau of Statistics, 2017). Badejo and Obadofin (2018) suggested that the best way to close the gap between fish demand and supply is to effectively instill fishery skills in secondary schools as outlined in the Senior Secondary School Trade Curriculum (SSSTC) to create jobs for the teeming Nigerian youth. However, the Nigerian Educational Research and Development Council (NERDC) (2012) introduced the SSEC, which recommended Fishery as one of the 34 trade subjects a student must offer before graduating from secondary school. According to Azunku, et al. (2013), the inclusion of 34 trade subjects including Fishery in the secondary school curriculum is intended to give students functional strategic skills for employment creation, wealth generation through investment as entrepreneurs. It is therefore expected that students should be well taught

the necessary skills needed in the production, processing, and selling of various farm animals including fishery while in school.

This approach, which focuses on the Trade curriculum, is commendable since it will provide young people with adequate and necessary skills for employment and wealth creation. Ogwu et al (2021) opined that the introduction of fishery as a vocational subject is very apt and timely. The fishery trade subject is a laudable policy that will equip the youths with necessary skills thereby eradicating hunger and decreasing poverty level yet trained and competent teachers were not recruited for the implementation, in the view of (Adumgbo 2018 & Ogwu et al, 2021), it is an aberration. This was also the position of Pelumi (2018) and Abudu (2018) who stated that the introduction of trade curriculum without recruiting manpower for its delivery or equipping the existing teachers with fishery expertise through in-service training is antithesis to the implementation of the curriculum. Ikeoji (2018) buttressed that the 34 trade curriculum related to agricultural subjects was designed without making provisions for the recruitment of competent hands that can handle the subjects and other researchers stated that they lack other facilities for implementing the curriculum. There is therefore, a need for entrepreneurs in the Fishery industry, like fish farmers, to be part of the implementation process since most secondary schools do not have the required facilities and materials that can be used to teach practical Fishery to students

The fishing business, with its entrepreneurs, presents a significant opportunity for implementation, and the resources required to achieve this trade subject should not pose significant challenges, this corresponds with Changilwa and Akala (2017), who ascertained that the lack of specific resources for implementing the 34 trade subject as well as the Fishery trade subject should not be too much of a problem because resource deficiencies can be remedied by signing equipment co-sharing agreements with comparable institutions and local businesses. Fishery entrepreneurs provide the necessary experience, competency, knowledge, skills, requisite tools, equipment, and facilities for Fishery development. In the process of implementing and developing fishing trade curriculum, involving and collaborating with fish farmers and its industry can aid in the improvement of the students' abilities and competence, help to foster and maintain students' enthusiasm in practical fishing (Oyeleye, et al. 2018).

The promotion of partnership between the training institution and industries/employers of labor, according to Mbah and Ebobuike (2016) is a successful strategy for achieving high-quality skill development. In the view of Allen (2017), there is an ever-increasing need for every business to partner with local schools, as matters such as society ills, federal and state budget deficits, and lack of school – real-world relevance, create endless opportunities for businesses to support local schools' efforts to educate the future workforce and citizens.

Perception is the way in which something is regarded, understood, or interpreted. Adeleke et al., (2018) defined perception as the process of interpreting and making sense of sensory information related to one's environment. In the view of Aprliani and Nugroho (2016) perception is the ability to receive, select, organize, and interpret information from sensory information related to fishery practices. Therefore, it is the ability to receive, select, organize, interpret and make sense of sensory information related to their roles in fishery practices and the fishery curriculum. It is the way the industry managers are involved or how they see their selves as partners in the fishery curriculum. To this end, it is necessary for industry managers to be mindful, interpret and make sense of their roles as partners in the school-industry partnership for skill acquisition in Delta State secondary schools.

Fishery entrepreneurs' involvement in developing the fishery curriculum was identified by the NERDC, who stated that the process of the development of the fishery trade subject includes series of planning, writing, critique and editorial workshops entailed wide consultations with stakeholders including fishery technicians and entrepreneurs (NERDC, 2012b), and this is consistent with some educational principles or theorems on Vocational education such as first, second, seventh, and eleventh theorems of Charlse Prosser as referenced in (Ikeoji, 2017, pp 33-35).

Melvin Barlow gave rise to seven Vocational Agricultural Education principles as cited in Ikeoji (2017), Principles five (5) and six (6) states that; "*Vocation education is planned and conducted in close cooperation with business and industry*" and "*Vocational education provides the skills and knowledge that are valuable in the labour market*".

John Dewey also postulated that "*practical application and successful transfer of knowledge, skills, and attitudes into real-world settings are the goals of instruction: emphasis is on learning by doing through a direct encounter with the phenomenon under study" (*Phipps et al., 2008 as referenced in Ikeoji, 2017). These principles contextualize that in implementing and developing the Vocational Agricultural Education (Fishery curriculum) the collaboration and partnership of industries (Fishery industry) with schools are necessary.

These theorems justifies the roles and partnership of Industry-based experts (Fish farmers) and community schools in planning, implementation and development of the Fishery trade curriculum for skill acquisition in Delta State secondary school to ensure that the aims and objectives are achieved.

This situation therefore raises the need for in-service training programmes to be organized for serving Fishery entrepreneurs in the industry (Fish Farmers) to help in the effective implementation of the Fishery trade curriculum, since most schools do not have the required facilities and equipment to teach this subject. The Fish Farmers are believed to have had successful experiences in the knowledge and operations involved in Fishery production, and also have the facilities (farms) that they can use in training students to acquire the various competencies involved in fishery production.

It is against this background that this study seeks to assess the perception of Industry manager's role as partners in the Fishery trade curriculum for skill acquisition in Delta State secondary schools.

Purpose of the Study

The purpose of this study was to ascertain the perception of Industry managers' role as partners in the Fishery trade curriculum for skill acquisition in Delta State secondary schools. The specific objectives are to;

i. Ascertain the industry managers' perception of their role as partners in the Fishery trade curriculum for skill acquisition in Delta State secondary schools
ii. Determine the level of partnership existing between industry managers and Delta State secondary schools in developing a Fishery curriculum for skill acquisition.
iii. Determine the willingness of industry managers to work with Delta State secondary schools in implementing and developing the new Fishery curriculum.

Methodology

Three research questions guided the study. This study adopted an ex-post facto research design using descriptive survey method. The instrument for data collection was well-structured questionnaire titled "Perception of Industry Managers' Roles As Partners in the Fishery Trade Curriculum Questionnaire (PIMRPFTCQ)" was developed on Likert 4-point scale, validated by experts in Agricultural Education and measurement and evaluation in Delta State University Abraka.

The questionnaires were administered with the help of five (5) research assistants in each Senatorial District. They were given a total of two hundred and sixty-five (265) copies of questionnaire to distribute to Fishery entrepreneurs (fish farmers) in the various Senatorial Districts in Delta State. Out of 265 copies of questionnaires that were administered, only 212 copies were retrieved, which represents a return rate of 80%. The statistical instruments adopted for data analysis (SPSS, Version 23) were frequencies, simple percentages, means ($\bar{x}$) and Standard Deviations (SD) for answering the research questions. A mean ($\bar{x}$) value of 2.50 was used as the benchmark for agreeing or disagreeing with any of the items for each Section.

Results

Table 1: Demographic Variables of Industry managers in Delta State (n = 212)

Variables	Frequency (F)	Percentages (%)
Sex		
Male	162	76.4
Female	50	23.6
Total	**212**	**100**
Educational level		
Primary Education	22	10.4
Secondary Education	58	27.4
Tertiary Education	132	62.3
Total	**212**	**100**
Years of Farming Experience		
Below 4	48	22.6
5 – 9	62	29.2
10 – 14	48	22.6
Above 14	54	25.5
Total	**212**	**100**
Location		
Rural	126	59.4
Urban	86	40.6
Total	**212**	**100**

Source: Field Work (2023)

Research Question 1

What is the industry managers' perception of their role as partners in the Fishery trade curriculum for skill acquisition in Delta State secondary schools?

Table 2: Mean ($\bar{x}$) and Standard Deviation Scores on the Industry Managers' Perception of Their Role as Partners in Developing the Fishery Curriculum (n = 212)

S/N	Perception of their Role as Partners	Mean ($\bar{x}$)	SD	Remark
1	**I Understand that:** I'm a partner and I have a role to play in developing and implementing the fishery trade curriculum.	2.43	1.066	Disagreed
2.	The curriculum is mainly focused on preparing students to have fishery as a trade for livelihood in agriculture	2.98	0.868	Agreed
3.	The activities and operations carried out in the industry are crucial in developing the practical skills of students studying fishery in secondary school.	3.01	0.835	Agreed
4.	I should be ready to participate in the planning process of the Fishery trade curriculum	2.01	0.835	Disagreed
5	As an expert in fishery, I have a role of being an instructor in training students in the production of fish	2.51	1.142	Agreed
6.	I should be ready to participate in the selection of the Learning experiences and activities of both students and teachers in the fishery trade curriculum	1.50	0.501	Disagreed
7.	I should be ready to purposefully engaged students in direct experience, to explore their problem-solving skills and have deeper understanding of fishery trade	2.46	1.149	Disagreed
8.	I should be ready to give out tools, equipment and machines to schools as instructional materials to facilitate learning process	2.94	0.885	Agreed
9	I should be ready to receive, supervise and evaluate students who are on farm projects and other supervised agricultural experience programme	3.51	0.501	Agreed
10.	I should be ready to organize a seminar that will promote industry-school relationship through talks, sharing new ideas in the fishery industry and acquiring knowledge about the principles and concepts of the Fishery trade curriculum	2.00	0.838	Disagreed
	Grand Mean ($\bar{x}$)	**2.34**	**0.79**	**Disagreed**

Source: Field Work (2023)

Table 2 showed the level of industry managers' perception of their role as partners in the Fishery trade curriculum for skill acquisition in Delta State secondary schools. Item 1 to 10 had a grand mean ($\bar{x}$) score of 2.34, and a standard deviation of 0.79, which is below the cut-off mean ($\bar{x}$) of 2.50. Table 4 also showed that 5 items had mean ($\bar{x}$) values greater than the cut-off

mean ($\bar{x}$) of 2.50, while 5 items had mean ($\bar{x}$) scores less than 2.50.

Table 2 also showed that 5 items had mean ($\bar{x}$) values greater than the cut-off mean ($\bar{x}$) of 2.50, which indicates that industry managers have positive perception of their role as partners in the Fishery trade curriculum for skill acquisition. High mean ($\bar{x}$) scores were recorded for items; 9 (I understand that I should be ready to receive, supervise and evaluate students who are on farm projects and other supervised agricultural experience programme, 3.51), among others

The other 5 items had mean ($\bar{x}$) scores less than 2.50, indicating that industry managers have negative perception of their role as partners in the Fishery trade curriculum for skill acquisition. The items are; 6 (I understand that I should be ready to participate in the selection of the Learning experiences and activities of both students and teachers in the fishery trade curriculum, 1.50), among others.

Research Question 2

What is the level of partnership existing between industry managers and Delta State secondary schools in developing the Fishery curriculum for skill acquisition?

Table 3: Mean ($\bar{x}$) and Standard Deviation Scores on the Level of Partnership Existing Between Industry Managers and Delta State Secondary Schools (n = 212)

S/N	The level of partnership existing between industry managers and secondary schools	Mean ($\bar{x}$)	SD	Remark
11.	A setup database for potential students and industrial companies	2.01	0.829	NP
12.	An established modalities for training and re-training students and teachers in sustainable fishery	1.47	0.500	NP
13.	An effective and efficient communication system	2.56	1.119	P
14.	Joint development projects initiative	2.03	0.840	NP
15.	Use competitive grant funds	1.49	0.501	NP
16.	Equipment co-sharing arrangements	2.58	1.151	P
17.	Facilities co-sharing arrangements	3.42	0.621	P
18.	Sponsorship of students by related industries	2.33	1.047	NP
19.	Development of the content used in training students	2.05	0.777	NP
	Grand Mean ($\bar{x}$)	**2.22**	**0.821**	**NP**

Keyword; P = Partnership, NP = No Partnership
Source: Field Work (2023)

Table 3 showed the level of partnership existing between industry managers and Delta State secondary schools in developing the Fishery curriculum for skill acquisition. Item 11 to 19 had a grand mean ($\bar{x}$) score of 2.22, and a standard deviation of 0.821, which is below the cut-off mean ($\bar{x}$) of 2.50. Table 5 also showed that 3 items had mean ($\bar{x}$) values greater than the cut-off mean ($\bar{x}$) of 2.50, while 6 items had mean ($\bar{x}$) scores less than 2.50.

Table 3 showed that 3 items with mean ($\bar{x}$) values greater than the cut-off mean ($\bar{x}$) of 2.50, indicates the partnership existing between industry managers and Delta State secondary schools in developing the Fishery curriculum. High mean ($\bar{x}$) scores were recorded for items; 17 (Facilities co-sharing arrangements, 3.42), 16 (Equipment co-sharing arrangements, 2.58), among others.

However, the 6 items had mean ($\bar{x}$) scores less than 2.50, indicating the no partnership existing

between industry managers and Delta State secondary schools in developing the Fishery curriculum. The items are 15 (Use competitive grant funds, 1.49), 12 (An established modalities for training and re-training students and teachers in sustainable fishery, 1.47), among others.

Research Question 3: How willing are the industry managers to work with Delta State secondary schools in implementing and developing the new Fishery curriculum?

Table 4: Mean ($\bar{x}$) and Standard Deviation Scores on industry managers' Willingness to Work with Secondary Schools (n = 212)

S/N	Willingness to Work with Schools	Mean ($\bar{x}$)	SD	Remark
20.	Partnering with my finance	2.05	0.825	Not Willing
21.	Partnering with my facilities	3.11	0.807	Willing
22.	Partnering with my farm structures	3.00	0.817	Willing
23.	Partake in the planning process of the schools' curriculum review process	3.04	0.819	Willing
24.	Attend conferences and workshops organized by schools	3.55	0.498	Willing
25	Share new ideas in the fishery industry with staff in community schools	2.99	0.835	Willing
26	Accept students for work study programme	3.46	0.499	Willing
27.	Give out tools and equipment to schools for skill development	3.50	0.501	Willing
28.	Ensure that the Fishery trade curriculum is effectively implemented in schools	2.91	0.841	Willing
	Grand Mean ($\bar{x}$)	**3.07**	**0.716**	**Willing**

Source: Field Work (2023)

Table 4 showed the willingness of industry managers to work with Delta State secondary schools in implementing and developing the new Fishery curriculum. Item 20 to 28 had a grand mean ($\bar{x}$) score of 3.07, and a standard deviation of 0.716, which is above the cut-off mean ($\bar{x}$) of 2.50. Table 7 also showed that 8 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.

Table 4 showed that 8 items with mean ($\bar{x}$) values greater than the cut-off mean ($\bar{x}$) of 2.50, indicates the willingness of industry managers to work with Delta State secondary schools in implementing and developing the new Fishery curriculum. High mean ($\bar{x}$) scores were recorded for items; 24 (Attend conferences and workshops organized by schools, 3.55), 27 (Give out tools and equipment to schools for skill development, 3.50), among others.

However, 1 item had mean ($\bar{x}$) scores less than 2.50, indicating the unwillingness of industry managers to work with Delta State secondary schools in implementing and developing the new Fishery curriculum, which is item 20 (Partnering with my finance, 2.05).

Discussion of the Findings

The Findings from the study were discussed under the following sub-heading**s:**

The Socio-Economic Characteristic of the Industry Managers

The results from Table 1 revealed that there were more male (76.4%) involved in fish farming than females (23.6%). This agrees with Falola et al. (2012) who reported that males were mostly involved in fish

farming than females. As pointed out by Okonji and Bekerederemo (2011), this is due to the tedious nature of some aspect of fish farming such as culturing which a lot of females may not be able to cope with.

As further presented, majority (62.03%) of respondent had attained higher education. The result agrees with Adefalu et al., (2013) and Ogunlade (2007) where they reported similar findings. They observed that successful fish farmers in Kwara and Osun states in Nigeria had higher formal education. Being literate will likely confer on the fish farmers' capacity to learn and be positively disposed to relevant information and enhance their competencies in fish farming and promote awareness and perception of their role as partners in Fishery curriculum.

Majority of respondents had 5-9 years of fish farming experience, on the average, the fish farmers have been into fish farming for 7 years, this implies that majority has experience in fish farming. As revealed by Olorunfumi et al., (2015), experience is a risk management factor in fish farming. The result obtained also revealed that majority of fish farmers reside in rural areas.

The Industry Managers' Perception of Their Role as Partners in Developing the Fishery Curriculum

The findings from Table 2 revealed that industry managers have positive perception of their role as partners in the Fishery trade curriculum for skill acquisition in the following areas; There is a positive understanding of their responsibilities; to receive, supervise and evaluate students who are on farm projects and other supervised agricultural experience programme, having a role of being an instructor in training students in the production of fish, and a clear understanding of the activities and operations carried out in the industry are crucial in developing the practical skills of students studying fishery in secondary school. This finding collaborated with the findings of Pauly (2019) who asserted that fish farmers have good perception of their roles as partners with school, as it provides an avenue to helps raise awareness and educate schools on various aspects of aquaculture and sustainable fish farming practices. This finding is also supported by Lubzens et al., (2019) who stated that fish farmers perceive school partnership as an avenue for knowledge exchange.

However, Table 2 also revealed from the grand mean $(\bar{x})$ that industry managers generally have negative perception of their role as partners in the Fishery trade curriculum. They make no sense or have no clear understanding of their responsibilities in the following areas: participating in the selection of the learning experiences and activities of both students and teachers in the fishery trade curriculum, and participating in the planning process of the Fishery trade curriculum. They believe that carrying out the identified roles requires time, resources and commitment. This finding is in line with the report of Krogstad et al., (2018) who reported that some fish farmers perceive the collaboration with schools to be time consuming, high demand on resources and commitment, and mostly lack institutional support.

Also, Wijaya and Saptanto (2014) opined that, some fish farmers may have a more cautious or skeptical view. They might question the necessity of the new Fishery curriculum, especially if they have been successfully operating their farms without formal education. They may be worried about the practicality and applicability of the curriculum to their specific farming practices and may prefer acquiring fishery skill is better through traditional methods or on-the-job training thereby working with schools becomes difficult. When industry managers do not make sense and have clear view of their roles as ally in the implementation and development of Fishery curriculum, this becomes an obstacle to industry and school partnership.

The Level of Partnership Existing Between Industry Managers and Delta State Secondary Schools

The findings from Table 3 revealed the level of partnership existing between industry managers and Delta State secondary schools in developing the Fishery curriculum for skill acquisition in terms of facilities co-sharing arrangements, equipment co-sharing arrangements, and an effective and efficient communication system. The findings are aligned with Ibuanokpe and Ikeoji (2022) who stated that the animal farmers are willing to partner with schools by means of sharing new ideas, facilities and equipment in the industry with community schools, allowing students to acquire skills effectively. The finding is also supported by Mbah, *et al.* (2018) who stated that the partnership can be done through giving out equipment and human resources to students for skill development.

However, Table 3 also revealed from the grand mean that basically, there is no partnership of industry managers and schools in terms of using competitive grant funds, operating established modalities for training and re-training students and teachers in sustainable fishery, and the development of the content used in training students, among others. The findings agreed with Krogstad et al (2018) who asserted that some fish farmers find it challenging to allocate time and resources such as grant funds, among others to accommodate school partnership with their daily farm

operations. The non-partnership of industry-schools might hinder educational and immersive experience for students, closing opportunities to learn about aquaculture and sustainable fish farming (Pauly, 2019). According to Mbah and Ebobuike (2016), it is a successful strategy for achieving high-quality skill development and deficiencies can be remedied. Therefore, if Fish industry managers' do not partner with schools it will negatively influence the effective implementation of the Fishery trade curriculum in secondary schools since it is an effective approach to achieving its goal and quality skill development as suggested by (Mbah & Ebobuike, 2016).

The Willingness of Industry Managers to Work with Delta State Secondary Schools

The findings from Table 4 generally revealed the willingness of industry managers to work with Delta State secondary schools in implementing and developing the new Fishery curriculum, The identified areas are as follow; attend conferences and workshops organized by schools, give out tools, partnering with my farm structures among others. This implies that basically, industry managers are willing to work with schools. The findings agree with Ibuanokpe and Ikeoji (2022) who stated that the animal farmers are ready in willingness to partner with schools. They also buttressed that animal farmers are willing to partner with schools with their structure, facilities, attend seminars and workshops organized by schools, ensure that the Animal Husbandry trade curriculum is effectively implemented in schools, partake in the planning process of the schools' curriculum review process among others (Ibuanokpe and Ikeoji, 2022).

However, Table 4 also revealed that industry managers are unwilling to work with schools in implementing and developing the new Fishery curriculum with their finances. This finding is supported by Ibuanokpe and Ikeoji (2022) who reported that farmers are not ready to invest their finances for the success of practical Animal Husbandry in secondary schools.

Conclusion

Based on the findings of the study, it was concluded that Industry managers have negative view of their roles as partners in the Fishery curriculum. There is no existing partnership between industry managers and schools as well as the industry managers willing to improve their abilities and work with schools to attain high yield of fish production and effective delivery and achievement of the Fishery curriculum objectives.

Recommendations

The following recommendations were made from the research findings:

1. Efforts should be made by the Government and Policy Makers to ensure that fish farmers are actively involved in the planning and implementation of the Fishery trade curriculum and by enhancing policy measures to secure industry managers' partnership. Since the industry managers are willing to work with schools, the Government should ensure that incentives are distributed to farmers on a regular basis to encourage them and also secure their partnership with schools.
2. Extension agents knowledgeable on fish farming should be deployed to the study area by the government as well as adequately funded as a strategy of strengthening awareness campaign / sensitization exercise on principles or policies that justifies farmers to actively play their role as partners in the fishery curriculum for effective delivery and achievement of the Fishery curriculum objectives.
3. School Administrators should align with Fishery entrepreneurs in communities to enable teachers and students utilize their resources as instructional materials for practical fishery.

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