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The Level of Performance of Grade 7 Learners in Agri-Fishery Arts

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ABSTRACT

The primary purpose of this study was to assess the level of performance of Grade 7 learners in Agri-Fishery Arts and to provide a basis for developing an intervention program. A quantitative research design using a descriptive-correlational approach was employed. The study involved 101 Grade 7 learners from Mabilbila Integrated School and Basug National High School in Santa, Ilocos Sur. The primary data-gathering instrument was a teacher-made and validated survey questionnaire. Findings revealed that 35 students obtained scores below 75, indicating that they did not meet the expected level of performance. This suggests that a considerable number of learners are struggling to achieve the required competencies in Agri-Fishery Arts, highlighting the need for targeted instruction and remedial support. Most profile variables showed no significant relationship with performance, including age, sex, mother's educational attainment, socio-economic status, and most categories of parents' employment ($p > 0.05$). However, father's educational attainment showed a significant positive relationship with performance ($r = .202$, $p = .049$), indicating that higher educational attainment of fathers was associated with better student outcomes. Certain categories of fathers' employment showed significant relationships, while mothers' employment had no significant association with performance. The assessment results indicated that most test items were easy, with an overall difficulty index of 0.78, and 72% of the competencies were mastered. The instrument demonstrated strong validity (overall mean = 4.89) and acceptable reliability (Cronbach's Alpha = 0.744). Furthermore, the t-test result showed a significant difference between the pretest and post-test results. The pretest obtained a mean score of 24.2105 with a standard deviation of 7.33673, while the post-test recorded a higher mean score of 39.0421 with a standard deviation of 4.80894. The mean difference of 14.83158 and the computed t-value of 21.896 with a significant value of 0.000 indicate a statistically significant improvement in the performance of the Grade 7 learners after the intervention in Agri-Fishery Arts. This implies that the instructional intervention was effective in enhancing students' learning outcomes.

Keywords: *Agri-Fishery Arts, MELCS, respondents, level of performance, level of difficulty, mastery level, validity, reliability, pretest, post-test*

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INTRODUCTION

Agri-Fishery Arts (AFA) is a vital subject in the Philippine high school curriculum, falling under the Technology and Livelihood Education and Technical-Vocational-Livelihood (TVL) Track of the K-12 program. This course is designed to equip students with fundamental knowledge and practical skills in the fields of agriculture and fisheries, which are cornerstones of the Philippine economy and crucial for national food security.

It moves beyond mere theoretical concepts, offering hands-on training in specializations such as crop production, animal raising, aquaculture, food processing, and farm management. Agri-Fishery Arts aims to foster an appreciation for natural resources and sustainable practices, preparing students not only for potential employment and entrepreneurship immediately after graduation but also for further technical-vocational training or higher education in related fields. Essentially, this subject is about cultivating the next generation of skilled, responsible, and environmentally conscious food producers and resource stewards.

Lagus et.al (2020) mentioned that the subject is designed to train students by developing their technical and entrepreneurial skills in both agriculture and fishery. It focuses on specialized areas such as crop production, animal production, aquaculture, fish capture, and fish processing. Ultimately, this training prepares learners to be globally competitive, empowers them to establish their own businesses as entrepreneurs, and contributes to the creation of numerous job opportunities.

The term Agriculture originates from two Latin words: *ager or agri,* meaning "field," and *cultura,* meaning "growing or cultivation." Thus, its literal meaning is the "growing and cultivating of the field." Agriculture is defined as the science or practice of farming. This encompasses the cultivation of soil for growing crops and fruit-bearing trees, as well as the raising of animals to provide food and other raw materials used to produce various other products. The United Nations Food and Agriculture Organization (UN FAO) defines a fishery as a unit determined by an authority or other entity that is engaged in raising and/or harvesting fish.

Berido et.al (2025) conducted a descriptive correlational study that investigated the relationship between Technology and Livelihood Education (TLE) skills and the academic performance of 324 Grade 6 public elementary pupils in the Digos Oriental district. Using a teacher-made survey, the study found that the pupils demonstrated an overall proficient or average skill level in TLE, with Agri-Fishery Arts and Home Economics ranking highest. Despite the pupils achieving a "Very Satisfactory" performance rating in TLE, the core finding was that no significant correlation existed between their TLE skills and their performance scores. Furthermore, some skills in Home Economics, Industrial Arts, and ICT did not meet future industry standards. Based on these results, the study recommends that school administrators and TLE teachers revise the curriculum and implement enhanced training or intervention programs—such as integrative and collaborative activities—to better address the diverse needs of the pupils and improve competency management.

A study by Cartas (2023) found a strong preference for continuing education among graduates of the Agri-Fishery Arts (AFA) track. Out of 21 respondents, the vast majority (76%, or 16 students) chose higher education as their curriculum exit. Only four students (19%) planned to seek employment immediately. This clearly implies that after Senior High School, the largest portion of AFA graduates intends to enroll in college and pursue further studies.

A Most Essential Learning Competency (MELC) is a core, indispensable skill or knowledge set identified by the Department of Education (DepEd) in the Philippines to guide instruction, particularly in

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times of limited teaching time or crises. MELCs represent the absolute minimum competencies a learner must acquire to succeed in subsequent grade levels and function effectively as a lifelong learner, prioritizing the criterion of "endurance"—meaning the skill is useful long after a unit is completed and applicable to real-life situations. The MELCs were created by significantly streamlining the original K to 12 curriculum competencies, ensuring that educators can focus their efforts on these critical skills, while still having the flexibility to contextualize lessons to the diverse needs and local environments of their students.

Aquino (2025) in her descriptive-correlational study investigated the relationship between the competence of TLE teachers and the academic performance of 283 randomly selected Grade 9 students in achieving the Most Essential Learning Competencies (MELCs) in Cookery within Quezon City's District V. The findings revealed that TLE teachers demonstrated strong competence in instruction, professional development, and community engagement, which coincided with students showing significant improvement in their Cookery knowledge, skills, and attitude. A key conclusion was the existence of a significant relationship between teacher competence and student performance in all three learning domains. Consequently, the researcher recommends that teachers pursue further professional development training and enhance community engagement (collaborating with parents/guardians), while students are advised to attend additional Cookery training—particularly in areas needing enhancement, such as food labeling, attractive presentation of salads, and proper packing according to safety standards.

Despite the implementation of the TLE/TVL subject, learners continue to face difficulties, particularly in the Agri-Fishery component. The researcher observed that many students struggle to master key topics and learning competencies in Agri-Fishery Arts. This observation prompted the researcher to explore strategies that could enhance student learning in this area. Among the various approaches to addressing low performance in Agri-Fishery, adopting appropriate and effective teaching methods were show the most promise.

In response, this study assessed the academic performance of Grade 7 learners in Agri-Fishery Arts. Interventions for learners with learning difficulties in this subject are often grounded in a behaviorist learning framework, which may help learners acquire procedural knowledge but often falls short in developing process skills and deep conceptual understanding.

This study primarily focused on the assessment of Grade 7 in Agri-Fishery, targeting the least mastered competencies during the second quarter at Mabilbila Integrated School and Basug National High School. The study focused to the Most Essential Learning Competencies(MELCS) of Agri-Fishery Arts such as Career and Business Opportunities in Agriculture, Agricultural Tools, Implements, and Equipment, Hazards and Risks in Farm Operations, Harvesting and Post-Harvesting Practices, Farm Watse Processing, Breeds of Animals, Poultry and Livestock Materials, Tools, and Equipment and Their Uses Based on Industry Standards, Feeding Management According to the Philippine National Standards (PNS) for Poultry and Livestock Animals, Products and By Products of Poultry and Livestock Production and Farm Waste Management in Poultry and Livestock Production According to RA 9003.

Framework of the Study

The following theories and concepts provided a clearer perspective of this study:

Keller's Personalized System of Instruction (PSI) emphasizes that learners should be provided with sufficient time and appropriate instructional materials to help them keep pace with their peers

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(Motamedi & Sumrall, 2000). Originally developed as a classroom-based teaching approach, PSI aimed to enhance student achievement while moving away from traditional educational methods by applying positive reinforcement in learning. A key feature of PSI is individualized pacing, which stems from its requirement for mastery of each unit before progressing. Since students vary in the time they need to master different topics, PSI allows learners to work on various units simultaneously, depending on their individual progress. Unlike the rigid, uniform pace of traditional instruction, the self-paced model of PSI accommodates individual learning differences and supports students in achieving mastery at their own speed (Motamedi & Sumrall, 2000).

Furthermore, Sweller, the proponent of **Cognitive Load Theory,** emphasized that effective instructional materials enhance learning by directing the learner's cognitive resources toward activities that support schema acquisition. Materials that facilitate this process are considered effective (Cooper, 1998). Therefore, instructional resources should serve as learning guides that are personalized, self-paced when possible, and include meaningful and relevant activities. Additionally, they should encourage learners to activate and build upon their existing knowledge or schema.

Statement of the Problem

The study assessed the performance of the Grade 7 learners of Mabilbila Integrated School and Basug National High School during the second quarter of S.Y. 2025–2026 in the subject Agri-Fishery Arts under Technology and Livelihood Education (TLE).

Specifically, the study sought to answer the following research questions:

1. What is the profile of the respondents along the following variables:
    a. age,
    b. sex,
    c. parents' educational attainment, and
    d. socio-economic status?
2. What is the level of performance of the respondents in Agri-fishery Arts?
3. Is there a significant relationship between the respondents' profile and their Agri-Fishery performance?
4. Is there a significant difference between pre-test and post-test?
5. What is the level of difficulty of the learners on the various topics covered in Agri-Fishery?
6. What is the validity and reliability of the instrument?

Hypothesis

There is a significant relationship between the profile and the Agri-Fishery Arts performance of the respondents.

Scope and Delimitation

This study focused on the performance of Grade 7 Agri-Fishery Arts learners of Mabilbila Integrated School for the Second Quarter of School Year 2025–2026.

Data on the respondents' profiles and their level of academic performance will be collected through a validated questionnaire. The respondents were Grade 7 learners from Mabilbila Integrated School and Basug National High School.

To collect the data, the researcher first administered a pilot test to the Grade 7 Agri-Fishery Arts learners in Rancho National High School and Santa National High School to determine the validity and

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reliability of the teacher-made questionnaire. The researcher also administered a two-part questionnaire. Part I gathered information about the respondents' profiles, while Part II consisted of a 50-item test prepared by the researcher and validated by three Agri-Fishery or TLE teachers.

METHODOLOGY

Research Design

This study employed the following research design:

Descriptive Research Design. It was a type of research method used to accurately and systematically describe the characteristics of a population, phenomenon, or situation. Bhat (2025) defined descriptive research design as a method that describes the characteristics of the population or phenomenon studied. Thus, the profile of the respondents in terms of age, sex, educational attainment of parents, socio-economic status, and their level of performance was described.

Correlational Research Design. It is used to determine the significant relationship between variables. Putri et al. (2025) define correlational research as a methodological approach that aims to identify and analyze the relationship between two or more variables without manipulation. In this study, in particular, the researcher looked into the relationship between the profile and level of performance of students.

Comparative Analysis. It is a systematic method used to compare two or more subjects to identify their similarities, differences, and patterns. Originated by Charles Ragin (1987) in his seminal work, The Comparative Method, Qualitative Comparative Analysis (QCA) was conceived as a case-based approach for 'comparing wholes as configurations of parts' (Ragin, 1987). While QCA is a multifaceted technique, this concise definition captures its core essence: it is a comparative method that treats individual cases as unique combinations of conditions. In this study, comparative analysis design—specifically focusing on correlation and differences—is used to identify and address the roots of the research problem.

Developmental Research Design. It is a systematic approach to designing, developing, and evaluating educational programs, processes, or products like instructional materials or software. Richey (1994) as cited by Bongolan (2018) has been defined as the systematic study of designing, developing, and evaluating instructional programs, processes, and products that must meet internal consistency and effectiveness criteria. In this study, a developmental research design was employed in formulating a questionnaire for the subject Agri-Fishery Arts, which experts validated

Artificial Intelligence (AI)

This study utilized Artificial Intelligence (AI) tools such as Grammarly, QuillBot, Gemini, and ChatGPT to assist with various research tasks, including checking grammar, rephrasing statements, summarizing related studies, interpreting data, and verifying content originality using Turnitin.

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Population and Locale of the Study

Total enumeration was used in determining the sample size and respondents of the study. The table shows the population of each school.

Distribution of Respondents in the Pilot Test by School

Schools	Population
Rancho National High School	22
Santa National High School	18
Total	**40**

Distribution of Respondents in the Pretest and Posttest by School

Schools	Population
Mabilbila Integrated School	75
Basug National High School	26
Total	**101**

Research Instrument

The researcher made a 50-item multiple-choice test covering the learning competencies in Agri-Fishery Arts for the second quarter. Agri-Fishery Arts and TLE teachers validated the test, and it was subjected to a reliability test. The content validation questionnaire adopted the instrument used by Garcia (2021). The researcher first administered a pilot test to determine the validity and reliability of the teacher-made questionnaire. A two-part survey questionnaire was also given. Part I collected the demographic profile of the respondents, including age, sex, parents' educational attainment, and socio-economic status. Part II consisted of an assessment designed to measure the performance level of the learner-respondents.

Data Gathering Procedure

The data for this study were collected through a systematic, multi-stage process encompassing preparatory permissions, preliminary assessment, expert validation, and implementation of the intervention. The initial step in this procedure involved the researcher requesting an ethics review from the ISPSC Research Ethics Committee (REC). Within two to three weeks, recommendations for necessary revisions and resubmission were provided. Following the revisions, the researcher secured formal approval and ethical clearance from the ISPSC-REC Office.

Once the ethical clearance was secured, the researcher then asked three Agri-Fishery Arts experts or TLE teachers to validate the teacher-constructed multiple-choice test. Upon receiving this validation, the researcher obtained the necessary permissions from the School Principals of Rancho National High School and Santa National High School to conduct a pilot test. The validity and reliability of the teacher-made

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questionnaire were calculated. The researcher then sought permission from the School Principals of Mabilbila Integrated School and Basug National High School to administer the pre-test and post-test. After definitively identifying the least mastered competencies through item analysis, the index of difficulty for each item was calculated.

Statistical Treatment of Data

To substantiate the presentation, analysis, and interpretation of the data gathered in this study, the following statistical tools were utilized:

1. **Frequency count and percentage** were used to describe the profile of the respondents.
2. **Mean** was utilized to describe the level of validity of the questionnaire.
3. **Simple Correlation Analysis** was conducted to determine the significant relationship between the profile and performance of the students.
4. **Cronbach's alpha coefficient** was used to measure the internal consistency, or reliability, of the survey items.

Ethical Considerations

For ethical research considerations, informed consent was considered most important. Before the study was conducted, all respondents received a detailed briefing and key information about the purpose of the study. Crucially, participation had to be entirely voluntary; researchers did not force respondents to be part of the study if they were not willing to participate. Through this process of informed consent, respondents willingly decided to take part in the study. Furthermore, to guarantee anonymity, secrecy, and the avoidance of potential harm, all information was held and handled with the utmost confidentiality, with the names and identities of the research participants not disclosed, in strict accordance with RA 10173, generally known as the Data Privacy Act of 2012

RESULTS AND DISCUSSION

The tables present the results of the study on the level of performance of Grade 7 learners in Agri-Fishery Arts. These results were thoroughly discussed, including their implications.

Table 1.1 Respondents According to Age

Age	Frequency	Percent
11 – 12	57	58.16
13 – 14	40	40.82
15 - 16	1	1.02
Total	**98**	**100**

Table 1.1 shows that the majority of the respondents are aged 11–12 years old (58.16%), followed by those aged 13–14 years old (40.82%), while only a very small percentage are 15–16 years old (1.02%), out of a total of 98 respondents.

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Table 1.2 Respondents According to Sex

Sex	Frequency	Percent
Male	53	54.08
Female	45	45.92
Total	**98**	**100**

Table 1.2 shows that out of 98 respondents, 53 (54.08%) are male and 45 (45.92%) are female, indicating a slightly higher number of male respondents compared to female respondents.

Table 1.3 Respondents According to Father's Educational Attainment

Educational Attainment	Frequency	Percent
Elementary Level	4	4.08
Elementary Graduate	4	4.08
High School Level	9	9.18
High School Graduate	32	32.65
College Level	9	9.18
College Graduate	36	36.73
Postgraduate of Higher	4	4.08
Total	**98**	**100**

Table 1.3 shows that among the respondents, most fathers have completed high school, with 32 fathers (32.65%) being high school graduates. Fewer fathers have attained college-level education (9.18%), while the smallest groups are those with elementary level or elementary graduate (each 4.08%). Fathers with some high school education account for 9.18% of the respondents.

Table 1.4 Respondents According to Mother's Educational Attainment

Educational Attainment	Frequency	Percent
Elementary Graduate	6	6.12
High School Level	8	8.16
High School Graduate	29	29.59
College Level	16	16.33
College Graduate	32	32.65
Post Graduate of Higher	7	7.14
Total	**98**	**100**

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Table 1.4 shows that among the 98 respondents, the majority of mothers are college graduates (32.65%), followed by high school graduates (29.59%), while fewer mothers have attained post-graduate education (7.14%) or only elementary education (6.12%), indicating a relatively high level of maternal educational attainment in the group.

Table 1.5 Respondents According to Socio-Economic Status

Educational Attainment	Frequency	Percent
3,000-5,000	51	52.0
5,000-10,000	23	23.5
10,000-15,000	9	6.1
15,000-20,000	6	6.1
20,000 and above	9	9.2
Total	**98**	**100**

The table shows that most of the respondents (52.0%) had a monthly socio-economic status ranging from ₱3,000–₱5,000, followed by 23.5% earning ₱5,000–₱10,000. A smaller percentage of respondents belonged to higher income brackets, with 9.2% earning ₱20,000 and above, while only 6.1% each were in the ₱10,000–₱15,000 and ₱15,000–₱20,000 income ranges, indicating that most respondents came from lower-income households.

Table 1.5 Respondents According to Father's Employment Status

Father's Employment	Frequency	Percent
Government Employee	4	4.08
Private Employee	21	21.43
OFW	3	3.06
Farmer	18	18.37
Vendor	4	4.08
Fisherman	5	5.10
Laborer	18	18.37
None	10	10.20
Total	**98**	**100**

Table 1.5 shows that most of the respondents' fathers were employed as private employees (21.43%), followed by farmers and laborers, both with 18.37%. A smaller percentage worked as fishermen (5.10%), government employees (4.08%), and vendors (4.08%), while 3.06% were OFWs. Notably, 10.20% of the respondents reported that their fathers had no employment. Overall, the data indicate that the majority of the fathers were engaged in private employment and manual or agricultural labor.

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Table 1.6 Respondents According to Mother's Employment Status

Mother's Employment	Frequency	Percent
Government Employee	6	6.12
Private Employee	10	10.20
OFW	19	19.39
Farmer	9	9.18
Vendor	9	9.18
Fisherman	3	3.06
Laborer	3	3.06
None	3	3.06
Total	**98**	**100**

Table 1.6 shows that the largest proportion of respondents' mothers were Overseas Filipino Workers (OFWs), comprising 19.39% of the total respondents. This was followed by private employees at 10.20%, while farmers and vendors each accounted for 9.18%. Government employees represented 6.12% of the respondents' mothers. Meanwhile, fishermen, laborers, and those with no employment each made up 3.06% of the total. Overall, the data indicate that a significant number of mothers were working abroad, while the rest were engaged in various local occupations or were unemployed.

Table 2. Level of Performance of the Respondents in Agri-Fishery Arts

Grading Scale	Frequency	Descriptions
90-100	5	Outstanding
85-89	22	Very Satisfactory
80-84	25	Satisfactory
75-79	11	Fairly Satisfactory
Below 75	35	Did Not Meet Expectation

Table 2 shows that in Agri-Fishery Arts, most respondents scored below 75 (35 students), indicating they did not meet expectations, while a smaller number achieved satisfactory (25 students), very satisfactory (22 students), fairly satisfactory (11 students), and outstanding (5 students) performance levels. The results suggest that a significant portion of students are struggling to meet the expected competencies in Agri-Fishery Arts, highlighting the need for additional support, targeted instruction, and remedial interventions to help learners improve their skills and understanding in this subject.

Table 3. Significant Relationship Between the Profile and Agri-Fishery Arts Performance of the Respondents.

Profile	Computed r	Significant Value
Age	.099	.342
Sex	-.189	.067

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Father's Educational Attainment	.202*	.049
Mother's Educational Attainment	.124	.233
Socio-Economic Status	-.031	.768
Father's Employment		
Government Employee	.098	.344
Private Employee	-.297**	.003
OFW	.115	.269
Farmer	.182	.078
Vendor	-.227*	.027
Fisherman	-.143	.167
Laborer	-.122	.240
None	.240*	.019
Mother's Employment		
Government Employee	.050	.633
Private Employee	-.162	.116
OFW	-.103	.322
Farmer	.070	.501
Vendor	.062	.551
None	.177	.086

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Table 3 shows that most of the respondents' profile variables had no significant relationship with their Agri-Fishery Arts performance, as indicated by p-values greater than 0.05. Specifically, age (r = .099, p = .342), sex (r = –.189, p = .067), mother's educational attainment (r = .124, p = .233), socio-economic status (r = –.031, p = .768), and most categories of parents' employment were not significantly related to performance. However, father's educational attainment (r = .202, p = .049) showed a significant positive relationship with performance at the 0.05 level, indicating that higher father's education was associated with better student performance. Regarding father's employment, being a private employee (r = –.297, p = .003) showed a significant negative relationship at the 0.01 level, and being a vendor (r = –.227, p = .027) also showed a significant negative relationship at the 0.05 level. Additionally, having an unemployed father (r = .240, p = .019) showed a significant positive relationship with performance. No significant relationships were found between the mother's employment and students' Agri-Fishery Arts performance.

Table 4. The T- test Result for the Significant Difference Between the Pretest and Posttest Results.

	Mean	Standard Deviation	Mean Difference	Computed t	Sig-value
Post Test	39.0421	4.80894	14.83158	21.896	0.000
Pretest	24.2105	7.33673			

Table 4 presents the t-test result showing the significant difference between the pretest and posttest results. The pretest obtained a mean score of 24.2105 with a standard deviation of 7.33673, while the posttest recorded a higher mean score of 39.0421 with a standard deviation of 4.80894. The mean difference of 14.83158 and the computed t-value of 21.896 with a significant value of 0.000 indicate a statistically

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significant improvement in the performance of the Grade 7 learners after the intervention in Agri-Fishery Arts. This implies that the instructional intervention was effective in enhancing students' learning outcomes

Table 5. Level of Difficulty on the Various Topics Covered in Agri-fishery Arts

MELCS	Difficulty Index	Descriptive Rating
1. Discuss career and business opportunities in Agriculture.	**0.78**	*Easy*
2. Identify and differentiate agricultural tools, implements, and equipment.	**0.74**	*Easy*
3. Discuss hazards and risks in farm operations, harvesting, and post-harvesting practices.	**0.70**	*Moderately Difficult*
4. Explain farm waste processing.	**0.72**	*Easy*
5. Determine the breeds of farm animals.	**0.78**	*Easy*
6. Determine poultry and livestock materials, tools, and equipment, and their uses based on industry standards	**0.84**	*Easy*
7. Discuss the feeding management according to the Philippine National Standards (PNS) for poultry and livestock animals.	**0.82**	*Easy*
8. Identify products, byproducts of poultry and livestock production, and discuss farm waste management in poultry and livestock production according to RA 9003.	**0.83**	*Easy*
Overall Difficulty Index	**0.78**	*Easy*

The table shows that most of the items in the assessment are easy for the learners, with difficulty indices ranging from 0.72 to 0.84, except for one item on hazards and risks in farm operations, which is moderately difficult (DI = 0.70), and the overall difficulty index of 0.78 indicates that the test as a whole is easy, reflecting that the learners generally have a good understanding of the MELCs topics.

Table 6. Summary of Mastery Level Per Competency

Mastery Level	No. of Items	Percentage of Total Items (%)
Mastered	36	72%
Nearly Mastered	11	22%
No Mastery	3	6%
Total	50	100%

The table shows that the majority of items (72%) were mastered by respondents, showing strong overall competency, while 22% of the items were nearly mastered, suggesting these areas may need additional practice, and only 6% of the items showed no mastery, highlighting a few concepts where students struggled.

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Table 7. Validity and Reliability of the Instrument

RESPONDENTS	MEAN	DESCRIPTION
The items included in the assessment instrument completely evaluate the students' performance in Agri-Fishery Arts	**5**	Very Valid
The item included in the topics adequately measures the areas for assessment of the subject.	**5**	Very Valid
The items are clearly stated in such a way that it warrant honest perception from the evaluator/respondents.	**4.67**	Very Valid
MEAN AVERAGE	**4.89**	**Very Valid**

Table 7 shows that the assessment instrument for Agri-Fishery Arts is considered very valid, as indicated by the high mean scores of the respondents (ranging from 4.67 to 5) and an overall mean of 4.89, showing that the items effectively evaluate student performance, adequately cover the topics, and are clearly stated to elicit honest responses**.** The reliability statistics of the research instrument yielded a Cronbach's Alpha coefficient of 0.744 for the 50-item questionnaire. According to the standard rule of thumb for reliability (Nunnally & Bernstein, 1994), an alpha value between 0.70 and 0.79 is considered "Acceptable." This indicates that the items in the questionnaire have a good level of internal consistency, meaning the questions consistently measure the same underlying construct. Consequently, the instrument is deemed reliable for data

CONCLUSIONS

Based on the findings, the following conclusions were drawn:

1. Most of the respondents were male, aged 11–12 years old, from a lower-income household (₱3,000–₱5,000 monthly). While most parents have achieved a high school or college education, the fathers are primarily engaged in private employment or manual labor, and a notable percentage of mothers support their families as Overseas Filipino Workers.
2. Father's educational attainment showed a positive relationship with performance. Interestingly, having an unemployed father also showed a positive correlation with performance.
3. Age, sex, mother's educational attainment, and socio-economic status did not have a significant relationship with student performance.
4. A significant portion of students (35 students) initially scored below 75, falling into the "Did Not Meet Expectations" category. Despite low initial scores, the overall difficulty index of the assessment was 0.78 (Easy).
5. Mastery levels showed that 72% of items were mastered and 22% were nearly mastered.
6. There was a statistically significant improvement between the pretest (mean = 24.21) and the posttest (mean = 39.04), with a significant value of 0.000.

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7. The instructional intervention was highly effective in enhancing the learning outcomes of Grade 7 learners, as evidenced by the substantial increase in mean scores from pretest to posttest.
8. The research instrument used is both reliable (Cronbach's Alpha of 0.744) and very valid (mean average of 4.89), ensuring it effectively measures the intended competencies.

RECOMMENDATIONS

From the conclusion drawn, the following were the researchers' recommendations:

1. Given the success of the intervention, the school should continue implementing similar instructional strategies to bridge the gap for students who "Did Not Meet Expectations".
2. Teachers should provide extra focus and varied teaching methods for topics like hazards and risks in farm operations, which learners found more challenging than other modules.
3. Teachers may develop SIM to improve and help the students to address the needs of the low-performing students and their least mastered skills.
4. The Deped may consider conducting training and seminar workshops intended for interventions, including development, orientation, and the use of the SIM among teachers.

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