LEVEL OF ACCEPTANCE AND EFFECTIVENESS OF TEACHING MATERIALS IN DEVELOPING ANALYTICAL AND CRITICAL THINKING IN FILIPINO (ANTAS NG PAGTANGGAP AT KABISAAN NG KAGAMITANG PANTURO SA PAG-UNLAD NG MAPANURI AT KRITIKAL NA PAG-IISIP SA FILIPINO)

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ABSTRACT

This study examines the Philippines' low critical thinking scores among secondary students as reported in PISA 2022 and to improve Higher-Order Thinking Skills (HOTS) materials and strategies, it focuses on evaluating instructional materials and the challenges faced when using HOT-based for Filipino 10. It is a mixed-methods research design comprising a pre-test and post-test with 80 students for quantitative, evenly divided into an experimental group and a conventional group. Qualitative data were collected through phenomenological interviews with three Filipino 10 and seven selected students from Grade 10 who used the instructional material crafted. The experimental group has a significant difference after the intervention with the (d = 1.00) while the conventional group showed no improvement in their scores. However, unequal involvement in group activities, time limits brought on by the condensed Most Essential Learning Competencies, and access to technology were found. The instructional module is Highly Acceptable to both teachers ($\bar{x}$ = 4.68) and students ($\bar{x}$ = 4.69) but it shows no significant correlation between students' acceptance and their academic improvement (r pre-test = –.16; r post-test = .12; p > .05). The findings suggest that positive perceptions alone are not evident in successful performance. Still, the actual use of the materials and the time dedicated to the tasks play a crucial role in achieving positive learning outcomes. HOTS-based instructional modules should be integrated more, technology funding should be increased, and teachers should be trained to create activities that emphasize higher-order thinking.

Keyword - *higher-order thinking skills1, critical thinking, level of acceptability, mixed-method design,*

1. INTRODUCTION

Amid rapid technological growth and the challenges faced by the Philippine education system, developing critical and analytical thinking skills has become even more important. This is not only about expanding students' knowledge but more importantly, about deepening their ability to analyze, think logically, and make meaningful decisions.

According to the results of the 2022 PISA assessment, the Philippines ranked 77th out of 81 countries, revealing significant challenges in the country's education system. Data showed that Filipino students lag approximately 5 to 6 years behind their international peers in academic skills. This underscores the urgent need for a stronger understanding and enhancement of Higher-Order Thinking Skills (HOTS), especially in teaching the Filipino subject. Therefore, this study aims to examine current teaching strategies and propose innovative and effective tools to strengthen students' critical thinking skills in Filipino.

On the other hand, Monde (2022) and Brion et al. (2022) stated that the language of a country, particularly Filipino, is a crucial instrument in expanding analytical and critical thinking. Without proper use and learning of language, it becomes difficult to develop critical evaluation skills. The significance of this study lies in understanding how the Filipino language can serve as a pathway to deeper comprehension across disciplines. Studies also reveal ongoing challenges in Filipino education, such as Gerilla (2021) who showed students' weaknesses in answering HOTS-related questions. While teachers recognize the importance of HOTS in instruction (Hamzah et al., 2022), the actual application of strategies to promote it in Filipino classes remains lacking.

However, there are still gaps in the current Filipino teaching system that need to be addressed. Based on PISA 2022 data and DepEd Agusan del Sur results (2023-2024), there are significant learning gaps in HOTS. The Mean Percentage Score (MPS) of 72.88% and the identification of the three least learned competencies prove that current teaching strategies are insufficient to enhance higher-order thinking skills. A local example is the lack of teaching materials in provincial schools. According to Bastida et al. (2022), involving 10 Indigenous Peoples Education (IPEd) teachers from three municipalities in Agusan del Sur, a shortage of digital equipment such as computers, projectors, and electricity was a major obstacle. Consequently, teachers were unable to use ICT-based lessons and had to create alternative materials. These experiences highlight the need for a comprehensive review and improvement of teaching strategies.

Moreover, analysis showed barriers faced by teachers and students in actually using the teaching materials. First, a lack of physical and technological resources, especially in remote schools in Agusan del Sur, presents a primary challenge. Some teachers lack sufficient access to computers, LCD projectors, and internet, making it difficult to implement ICT-based lessons. Interviews with some teachers revealed that power outages in classrooms slow down the integration of modern tools. Second, there is a shortage of teacher training on using HOTS-based modules, resulting in some teachers still relying on traditional lecture-based methods.

Given this context, this study holds great importance not only academically but also in local situations. In provincial schools, particularly those with limited access to modern equipment such as laptops and internet, strengthening HOTS is a crucial step to improving educational quality. The study's recommendations aim to provide innovative and practical teaching strategies that will guide teachers in enhancing Filipino learning. Additionally, it will provide concrete examples and materials that teachers can easily use in daily instruction. Through this, students are expected to be better prepared for the challenges of the modern world with skills in higher-order critical and analytical thinking, essential for understanding and expanding knowledge across disciplines.

1.1 Theoretical Framework

This study seeks to examine the effectiveness and acceptance of a teaching tool designed to develop students' critical and analytical thinking in Filipino. It aligns with the Department of Education's initiatives such as the RPMS and PPST that emphasize expanding Higher-Order Thinking Skills (HOTS). HOTS is part of PPST, focusing on strengthening literacy, numeracy, and analytical thinking skills. The ADDIE Model—a systematic process of Analysis, Design, Development, Implementation, and Evaluation—was used to develop the teaching tool,

ensuring strategies and materials meet students' needs. Two supporting theories were also integrated to deepen the impact of teaching strategies.

Initially, the ADDIE Model guided the overall design of teaching materials. This five-step process ensures that materials and strategies respond to students' learning needs, making it a systematic approach that focuses on every stage of tool development. The model not only centers on tool creation but also on improving students' overall learning experiences. In this study, ADDIE focused on expanding students' HOTS in Filipino, with each step carefully reviewed to ensure strategies and tools foster critical, analytical, and creative thinking skills.

The Vygotsky's (1978) Constructivist Learning Theory played a key role. According to this theory, students are not passive recipients of knowledge but actively construct understanding through experience and interaction with their environment. Learning is thus not just receiving information but making meaning from experiences. Using this theory, the instructional materials were designed to provide opportunities for students to explore and question, promoting deeper learning of language and Filipino skills, while enhancing critical and analytical thinking as a foundation for learning and connecting with other disciplines.

To further deepen analysis, Bloom's Taxonomy (1956), revised by Anderson and Krathwohl (2001), provided a hierarchical structure of thinking skills. It consists of six levels, ranging from the lowest—Remembering—to the highest—Creating. These levels offer concrete guidance for planning activities that expand students' HOTS. For instance, tasks promoting analysis, evaluation, and creation represent significant steps toward strengthening critical and analytical thinking. This framework helped identify skills that need development for student success not only in Filipino but in other subjects and everyday life. Overall, this study advocates for quality education benefiting students nationally and aiming for global learning standards.

1.2 Statement of the Problem

The main purpose of this study is to assess the Level of Acceptance and Effectiveness of Instructional materials in Developing Critical and Analytical Thinking in Filipino. To achieve this, the study aimed to answer the following questions:

1. What are the mean scores of the pre-test and post-test for the two groups (Conventional and Experimental)?
2. What is the significant difference between the mean scores of the two groups?
3. What challenges do teachers and students face in using the instructional materials?
4. What is the level of acceptance of teachers and students towards the instructional materials?
5. What is the significant relationship between pre-test and post-test mean scores and students' acceptance level of the instructional materials?
6. What teaching tool can be developed based on the study results?

1.3 Hypothesis

The following hypotheses will be tested at a 0.05 significance level:

Ho1: There is no significant difference between the mean scores of the Pre-Test and Post-Test of students from the Conventional and Experimental groups.

Ho2: There is no significant relationship between mean scores on the post-test and the students' level of acceptance of the instructional materials.

1.4 Scope and Limitations

This research covers the Level of Acceptance and Effectiveness of Instructional materials in Developing Critical and Analytical Thinking in Filipino for Grade 10 students during the 2024-2025 school year.

The study also examined the actual use of the new Filipino 10 teaching tool during the second grading period, including its integration in lessons and its effect on student performance. Focus was placed on how the tool impacted students' learning, particularly in developing critical and analytical thinking, measuring if it helped improve student performance and deeper understanding of the subject.

All Filipino 10 teachers who used the module were involved to ensure data came directly from users. Two sections of Grade 10 students, each with 40 students, participated, representing varied abilities and needs.

Despite aiming to provide valuable information, some limitations were unavoidable. First, due to time constraints, the researcher focused on a single lesson during the second grading period as the basis for implementation and results used in this research. It was anticipated that stronger relationships would form between students and teachers in their classes, making this an appropriate period for the study.

Second, pilot testing of the instrument was done with one Grade 10 section taught by the researcher, so this school was not included in the study implementation. Pilot testing helped improve instrument quality before the actual implementation, resulting in more accurate and reliable data (Mertler, 2022). Thus, results may not fully represent the entire Grade 10 population, especially other sections or classes.

Third, one limitation of the module was using summaries instead of full literary texts due to time constraints and ease of providing activities. The researcher acknowledges that full texts are important for deeper analysis. Future researchers are encouraged to include complete works in the module to better develop analysis and interpretation skills.

Finally, the school where the researcher teaches was not included in the study since it was used for pilot testing. Therefore, study results may not be applicable to other schools with different contexts and needs.

2. REVIEW OF RELATED LITERATURE AND STUDIES

This chapter discusses related foreign and local literature and studies from books, theses, dissertations, journals, websites, and articles relevant to the research. To provide clarity and direction to this study, the following related literature and studies are presented. This section explains the key concepts and principles essential to understanding the acceptance and effectiveness of teaching materials in developing analytical and critical thinking skills in Filipino.

2.1 Related Literature

The following literature contains ideas about the purpose of Higher-Order Thinking Skills (HOTS). Additionally, it describes the role of teaching materials in helping students achieve these skills.

2.1.1 Foreign

Higher-Order Thinking Skills (HOTS) are an important part of education, which aims not only to teach rote memorization of information but also to train students to think deeply and analyze complex issues. In this context, HOTS focuses on expanding students' abilities in analysis, solution development, and decision-making. At a deeper level, understanding its concepts and applications gives students the opportunity to think more critically and generate ideas applicable in their daily lives.

In the revision of Bloom's Taxonomy by Anderson et al. (2001), the learning process begins at the lowest level of remembering and progresses to higher-order critical thinking levels such as evaluation and creation. This model shows that each learning step deepens the student's skills in understanding and applying lessons. Therefore, the goal of education is not only to disseminate knowledge but also to focus on higher-level thinking skills.

Moreover, the integration of culture and local experience in modules and teaching materials is important. For example, Chai et al. (2021) in Malaysia showed that the use of e-learning platforms and modules helps improve students' critical thinking skills. This highlights the importance of utilizing modern technology in teaching, as online resources provide deeper analysis and evaluation of lessons compared to traditional learning methods. Similarly, Dahlstrom et al. (2020) in the United States demonstrated that virtual simulations and interactive modules increase students' evaluative thinking and problem-solving skills. These tools help students think more critically and analyze issues more thoroughly.

Kasulotan (2024) also showed that teaching materials that consider language and culture help broaden students' critical thinking skills. When materials are adapted to students' language and culture, they become more engaged in understanding lessons, leading to greater success in deep analysis and solution-making for academic issues.

Therefore, teaching materials alone are not enough to broaden students' HOTS. According to Sali et al. (2024), modules are excellent tools, but teachers and curriculum developers must work together to teach proper pedagogy. Based on Duraippah et al. (2022), teaching materials do not just contain activities but also enhance students' ability to develop solutions for complex issues. This prepares students to collaborate and analyze information to generate new knowledge.

In fact, there are challenges faced in focusing students on learning. Sada (2019) stated that HOTS cannot be achieved through rote learning or memorization alone. Students need projects and tasks relevant to real life to make education meaningful and useful. Additionally, Jansen and Moller (2022) noted that activities different from the usual ones surely expand students' abilities in analysis and decision-making. This includes the use of e-learning platforms, which according to Alenezi (2020), offer higher engagement and better meet individual student needs.
Overall, technology and modern instructional materials play an important role in expanding students' HOTS. However, challenges exist such as lack of resources and internet access. Teachers and curriculum developers must work together to address these challenges through proper integration of technology and teaching strategies. Ultimately, the goal is to help students think deeply, analyze ideas, and develop solutions beneficial to their lives and society.

2.1.1 Local

With the continuous changes in the Philippine education system, the evaluation of teaching materials and their contribution to developing students' analytical and critical thinking in Filipino has become more important. Since 2019, various literature and research have clarified the role of these materials in the classroom and policies supporting the implementation of innovative teaching strategies.

According to Cardino and Dela Cruz (2020), four teaching strategies—cooperative learning, deductive approach, inductive approach, and integrative approach—have clear and significant effects on students' academic performance. Along with modernization, Saavedra (2020) emphasized that the rise of digital technology posed additional challenges for public school teachers due to lack of technical skills and adequate materials. Meanwhile, Cabigao (2021) shared that teacher satisfaction increases teaching effectiveness and directly impacts the effective use of teaching materials.

Beyond the technical aspect, the role of literature in fostering critical thinking is important. Ki (2020) stated that literature reflects the experiences, culture, and traditions of early Filipinos. Thus, is important in teaching to deepen students' understanding of their identity. Nerizon (2021) added that the use of literature in teaching Filipino plays a large role and should not be considered just simple reading material but a platform to deepen students' higher-order thinking.

Related to this, the Department of Education strengthens the integration of HOTS in subjects including Filipino. DepEd Memo No. 003, s. 2023 emphasized classroom observations where two indicators focus on HOTS application. Meanwhile, DepEd Order No. 007, s. 2024, revising the Learning Continuity Plan (LCP), advocates stronger focus on quality education under School-Based Management (SBM). These policies imply that the use of teaching materials is no longer just the teacher's personal initiative but an important part of national goals to improve learning levels.

Therefore, interest among researchers in measuring and developing students' critical thinking is growing. Lansangan and Orleans (2024) said many science students are still not accustomed to information organization and analytical thinking, showing the need for systematic training in these skills that can also be adapted to Filipino. Lopez et al. (2023) similarly concluded that although teachers recognize the importance of critical thinking, it is not always evident in actual classes, requiring more concrete training.

This means the teacher emerges as a guide and foundation to make learning meaningful and high-quality. Cordova (2020) said the most important need of Filipino teachers is training on how to integrate HOTS in online and

blended learning so that when teachers skillfully provide metacognitive questions and tasks, student participation increases.

In classrooms, Garcia and Razon (2021) stated that differentiated instruction relying on conscious monitoring and immediate teacher guidance raises not only engagement but also students' critical-thinking scores. Meanwhile, Santos et al. (2022) found that when active learning methods (debate, role-play, problem-based tasks) were applied in Filipino, teachers as facilitators ensured discourse depth, resulting in deeper understanding of symbolism and messages in literary works.

Thus, Lansangan and Orleans (2024) suitably urged science teachers to emphasize metacognitive guidance to develop critical thinking—a recommendation transferable to literature. Garcia et al. (2024) found Project-Based Learning (PjBL) helps broaden understanding of concepts and ideas even in science, applicable to Filipino especially in literary analysis. Hatmanto et al. (2024) also suggested debate as an effective strategy for intensive thinking, argument development, and expressing opinions, important in this subject.

However, DepEd launched Higher-Order Thinking Skills Professional Learning Packages (HOTS-PLPs) in 2023 aimed at empowering teachers to develop lessons and materials actively applying HOTS. Current initiatives also include training in SOLO Taxonomy-Based Approaches, providing systematic ways to measure student thinking levels. Actual implementation uses Classroom Observation Tools (COT) to assess strategy use in classes.
In sum, teaching materials are not just supports but weapons to enrich each student's mind and ability. Through literature, pedagogical innovations, and Department of Education programs, students' ability to think more deeply, carefully, and critically is broadened. Ultimately, effective use of teaching materials is key not only to academic success but also to forming citizens capable of meaningful thinking and decision-making in real life contexts.

2.2 Related Studies

This section presents two results about the state of Higher Order Thinking Skills without applied innovation and the progress in developing teaching materials for analytical and critical thinking.

2.2.1 Foreign

Around the world, educators have actively innovated to advance HOTS, especially in literature. For example, Afzal et al. (2024) showed that systematic teaching of critical thinking in English literature resulted in a 24% increase in students' argument construction and textual analysis after only six weeks of intervention.
Similarly, Shanti et al. (2022) emphasized that integrating metacognitive self-assessment at each literary task stage helps students plan, monitor, and adapt their strategies, related to a 0.63 "large effect size" in their Indonesian experiment.

On the other hand, in digital education, the use of technology to support HOTS is timely. According to Bhatia et al. (2022), digital game-based learning (DGBL) opens opportunities for interactive teaching. However, internet access and equipment shortages pose challenges, as Khotimah (2020) noted in her review of various online modalities. Consoli et al. (2024) found a positive correlation ($r = .71$) between quality technology integration and students' behavioral engagement in literary analysis when scaffolding and rubrics are clear.

However, technology alone is not the key; appropriate pedagogy is also crucial. Hastuti et al. (2024) reported that differentiated problem-based learning (DPBL) in short story analysis led to statistically significant gains in analysis ($p < .01$) and evaluation ($p < .05$) competencies of Senior High students in Vietnam. Kassa et al. (2024) found multimedia and dynamic classroom integrated instruction had medium-to-large effects ($d = 0.58$) on HOTS development in students who identify as visual or kinesthetic learners—showing multimodal texts aid deeper reading and interpretation.

Beyond strategies, teachers' perspectives are important. Fenyi and Mensah (2022) found many teachers are positive about HOTS but face barriers like lack of materials, knowledge, and time. Hence, teacher support through clear guidelines, training, and adequate resources remains essential.

2.2.1 Local

The Philippine context is not far off. Recognition of the teacher's role in fostering critical thinking is expanding. Magno et al. (2024) proved effective strategies such as "Filipino word of the day," role-play, and

language games rely on active teacher guidance in selecting, monitoring, and giving feedback for meaningful and active Filipino learning.

Furthermore, Dela Cruz and Magsino (2021) showed that when higher-order thinking activities (analysis, evaluation, creation) are emphasized, Filipino youth score higher and interpret literary texts more deeply compared to traditional recall or teacher interpretation methods. Similarly, Cordova (2020) stressed continuous teacher training to keep up with modern teaching methods.

Meanwhile, Gerilla (2021) noted students face challenges answering HOTS questions, indicating the need for guidance from teachers and parents. This deepens the importance of collaborative learning. Conversely, successful innovations are evident. Dela Peña et al. (2023) demonstrated the effectiveness of interactive modules in teaching suprasegmentals. Benedicto and Andrade (2022) found Problem-Based Learning (PBL) effectively develops pre-service teachers' analytical skills.

This implies materials should be easy to use, adaptable to different levels, and effective for remedial or enrichment learning. Felonia (2021) pointed out that assessment should not only measure what students know but the depth of understanding and application in real situations. In short, local studies echo foreign ones: HOTS is not just a curriculum concept but a practical classroom necessity.

2.3 Synthesis

From the presented literature and studies, both foreign and local, it is clear that Higher Order Thinking Skills (HOTS) are not just paper concepts but vital skills to develop in every student. Studies from countries like Malaysia and the United States show traditional teaching is insufficient for higher-level thinking. Instead, innovative methods like problem-based learning, digital game-based learning, and interactive modules are more effective in teaching HOTS. International research also shows technology's significant role in expanding cognitive skills but with challenges like access and teacher readiness.

Meanwhile, in the Philippine context, teachers share responsibility to promote analytical and critical thinking development. Local studies reveal the use of literature as a discussion platform and the selection of appropriate teaching materials deeply influence students' understanding. Notably, policies from the Department of Education, such as classroom observation tools and learning continuity plans, encourage systematic HOTS application in subjects, especially Filipino.

Examining these, both local and foreign literatures and studies advocate for teaching materials that are not only informational but transformational. Through innovative strategies, technology, and curriculum design, students are more likely to learn not just to memorize but to think deeply, analyze carefully, and make meaningful decisions. Ultimately, these form the foundation of this research, aiming to assess the acceptance and effectiveness of teaching materials in developing students' analytical and critical thinking in Filipino. The next chapter discusses the methodology used to measure and validate the research objectives.

3. RESEARCH METHOLOGY

This chapter presents the methodology used in this study, including the research design that guided the entire research process. It also discusses the research setting and the instruments utilized in gathering data. Furthermore, the steps taken in data collection and the criteria for selecting participants are explained. The total number of participants is also presented, along with the statistical methods used to analyze and interpret the collected data.

3.1 Research Design

The researcher employed a mixed methods research design, which combines both quantitative and qualitative approaches to obtain a comprehensive understanding of the effectiveness and acceptance of instructional materials in developing the critical and analytical thinking skills of students in Filipino.

For the quantitative part, an experimental design was used to measure the impact of the instructional materials through pre-test and post-test assessments. This aimed to identify the changes in students' knowledge levels after the intervention. The analysis also included the relationship between students' test scores and the level of acceptance of the module by both teachers and students.

Meanwhile, for the qualitative part, the phenomenological approach was adopted to explore and understand the experiences of teachers and students using the instructional materials. According to Ho and Limpaecher (2022), this research approach seeks to comprehend people's personal experiences, how they feel, think, and interpret a situation while the researcher sets aside personal biases to genuinely hear and understand the participants' voices. This makes the approach suitable for the use of guided interviews, allowing participants to openly share their actual experiences and perspectives.

3.2 Research Setting

The study was conducted in four (4) public secondary schools in Prosperidad, the capital town of Agusan del Sur, focusing specifically on District IV. The schools were categorized into two groups: medium-sized schools, which include Lucena National High School in Barangay Lucena and San Vicente National High School in Barangay Vicente; and small-sized schools, which include West Prosperidad National High School in Barangay Las Navas and Aurora National High School in Barangay Aurora.

All four schools offer education from Grade 7 to Grade 10 for Junior High School and Grades 11 and 12 for Senior High School.

Figure 1: Location of Secondary Schools in Prosperidad IV

3.3 Respondents of the Study

The respondents and participants of this study included Filipino 10 teachers and Grade 10 students.

Participants were selected through purposive sampling, a strategy where individuals are deliberately chosen based on their knowledge, experience, and relevance to the study's objectives. According to Etikan (2021), this method is suitable for research focusing on a particular context, such as the implementation of a module. Hence, Filipino 10 teachers and their students were chosen due to their direct involvement with the instructional materials. This approach ensured that the data collected were meaningful and aligned with the research objectives.

This targeted approach resulted in more focused data collection from institutions closely connected to the research context. Memon et al. (2025) also noted that purposive sampling is effective in studies requiring in-depth data from participants with specific knowledge and experience on the topic, facilitating a thorough understanding of the phenomena studied.

For the teachers, complete enumeration was used, involving all three Filipino 10 teachers as respondents. Due to the small number of teachers, all were included to obtain comprehensive insights from the entire population. Arnab (2017) supports this method when the goal is to study all members of a target population for accurate analysis.

For students, stratified random sampling was applied to ensure fair representation from two sections: Conventional and Non-Conventional. Each section had 40 students, both heterogeneous groups, with no selection based on class performance. Additionally, seven selected students and three teachers participated in the qualitative part through interviews guided by a questionnaire. The limited number of participants for qualitative data was deliberate to deepen the data collection and ensure the quality of information gathered from their personal and meaningful experiences. Creswell and Poth (2021) recommend three to ten individuals for in-depth interviews.

Thus, the respondents and participants were Grade 10 students and teachers during the 2024-2025 school year from public secondary schools in Prosperidad IV, who had experienced the use of the instructional materials in the second quarter.

3.4 Research Instrument

The following tools were prepared for data collection:

An interactive module based on the Most Essential Learning Competencies (MELCs) for the Second Quarter in Filipino 10, written and developed by the researcher with the integration of Higher-Order Thinking Skills (HOTS) in the activities. The module was validated by three experts using the DepEd LRMDS Tool to ensure its legitimacy and appropriateness.

Pre-Test and Post-Test consisting of 20 items, all of which were Higher-Order Thinking Skills questions. These tests were designed to measure students' knowledge levels before and after the implementation of the two instructional approaches. The instrument was self-made and validated using an adapted tool from Oducado (2020). Pilot testing was conducted to ensure reliability.

A guided questionnaire containing questions aimed at identifying the participants' perceptions and experiences using the instructional materials. This tool was validated using an instrument by Paredes et al. (2021) and was employed in interviews with three Filipino 10 teachers and seven Grade 10 students.

For acceptance, a tool from Garcia (2021) was used to measure the acceptance level of the instructional materials by teachers and students in the experimental group.

The Acceptability Tool for Translation by Isla (2022) was utilized to measure the legitimate translation of the adapted instrument into Filipino.

Semi-detailed lesson plans in two versions, both applying HOTS but differing in approach: the Conventional group used traditional teaching methods like lectures and pencil-paper tests, while the non-Conventional group employed student-centered activities such as collaborative tasks and peer assessments.

3.5 Data Gathering Procedure

Data collection followed three stages: before implementation, during implementation, and after implementation. Each stage involved clear steps to ensure the integrity, validity, and ethical conduct of the study.

Before implementation, the researcher validated all instruments, including the interactive module, pre-test/post-test, and guided questionnaire. Three experts reviewed these tools using the DepEd LRMDS Tool and other validated instruments to ensure their appropriateness for Grade 10 students. Permission was then sought from the Division Office of the Department of Education in Agusan del Sur, school principals, and Filipino 10 teachers to conduct the research.

After securing permission, the pre-test was administered to selected students from both conventional and non-conventional sections to assess their initial knowledge and skills.

During implementation, actual teaching was conducted using a lesson from the interactive module that incorporated HOTS for both groups. However, the teaching approaches differed: the conventional group received traditional lecture-discussion and paper-pencil tasks, while the non-conventional group engaged in modern interactive methods such as collaborative activities, visual organizers, and peer assessments. After two weeks of implementation, the post-test was administered to measure changes in students' learning outcomes.

After implementation, interviews were conducted with three teachers and seven selected students using the guided questionnaire. This phase aimed to gain deeper insights into participants' experiences, perceptions, and

potential challenges faced when using the instructional materials. The responses were transcribed, analyzed, and categorized into emerging themes through thematic analysis.

Ethical considerations were observed throughout, with all participants providing informed consent before involvement. The researcher ensured confidentiality and that all data collected would be used solely for academic research purposes.

3.6 Statistical Treatment

Data analysis was conducted to address six main problems outlined in the study objectives. To ensure the effectiveness, relevance, and validity of the instructional materials in developing critical and analytical thinking in Filipino 10, the following statistical and qualitative methods were used:

One primary goal was to determine the average scores of students before and after using the instructional materials in different approaches. The weighted mean was used to find the central tendency of pre-test and post-test scores for both conventional and non-conventional groups. According to Andale (2014), the weighted mean is appropriate when data have different weights and effectively describes overall student performance at each teaching stage.

To evaluate whether there was a significant change in students' academic performance after the intervention, a t-test for dependent samples was conducted. Ross and Willson (2017) explain that this test is effective for comparing two related sets of data, such as pre-test and post-test scores from the same participants.

Thematic analysis was applied to describe the experiences of teachers and students using the instructional materials. This method analyzed open-ended responses from interviews with selected participants. Braun and Clarke (2006) describe thematic analysis as a systematic way to identify and interpret emerging themes from data. Kiger and Varpio (2020) emphasize its importance in giving voice to personal and contextual experiences.

Additionally, the acceptance level of participants toward the instructional materials was measured using weighted mean. This assessed the adequacy, efficiency, and relevance of the module in actual use. David et al. (2020) notes this analysis is suitable for measuring usability and relevance of instructional materials from users' perspectives.

Finally, to determine if there was a correlation between acceptance level and students' academic performance, the Pearson Product-Moment Correlation coefficient (r) was used. Akoglu (2020) explains that Pearson's r measures the strength and direction of relationships between two quantitative variables. This identified whether higher acceptance of the module related to better test scores.

In summary, the combined use of weighted mean, t-test, Pearson r, and thematic analysis formed a solid foundation to address the study's objectives and develop concrete pedagogical recommendations. These findings supported the creation of instructional materials appropriate for modern teaching to enhance the critical and analytical thinking skills of students.

4. PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

This chapter presents the analysis and interpretation of the data collected from the students and teachers who served as participants in the study. The goal was to measure the level of acceptance and the effectiveness of an instructional material designed to sharpen critical thinking skills in Filipino among selected secondary schools in Prosperidad.

Table 1: Mean scores of the Pre-test and Post-test for the Two Groups (Conventional and Experimental)

Group	N	Pre-test Mean	Std. Dev.	Description	Post-test Mean	Std. Dev.	Description
Conventional	40	9.50	3.553	Low Proficiency	9.90	2.744	Low Proficiency
Experimental	40	10.15	2.949	Moderate	13.95	1.974	Moderate

				Proficiency			Proficiency

Legend

Scale | Percentage | Description

18–20 | 90–100 | Very High Proficiency
15–17 | 75–89 | High Proficiency
10–14 | 50–74 | Moderate Proficience

5–9 | 25–49 | Low Proficiency
0–4 | 0–24 | Very Low Proficiency

Based on the Table 1, it shows that the conventional group remained at the *Low Proficiency* level in both assessments, registering a pre-test mean of 9.50 and a post-test mean of 9.90. This negligible gain suggests that the traditional strategy did little to deepen understanding. By contrast, the experimental group's mean climbed from 10.15 to 13.95—evidence of meaningful growth that can be linked to the contextualized, inquiry-driven materials employed. The smaller post-test standard deviation (1.974) further indicates more aligned performance among experimental-group learners.

According to Hastuti et al. (2024) reinforce this pattern, noting that students who work with interactive, differentiated resources lean into deeper learning and build sturdier knowledge foundations. Shanti et al. (2022) likewise found that modules built around higher-order thinking boost student performance by honing analytical and critical-reasoning skills.

It shows the experimental group's post-test standard deviation dropped to 1.974, meaning their scores clustered more tightly. It proves to the study of Kassa et al. (2024) argue that such low dispersion often signals a well-designed pedagogy with content laid out clearly and systematically—key ingredients for collective classroom success.

The finding shows that the instructional material given to the experimental group proved to be an effective tool and strategy, raising not just test scores but the overall quality of learning in the class.

Table 2: Significant Difference in Mean Scores between the Conventional and Experimental Groups

Phase	t-value	p-value	Decision	Interpretation
Pre-test	0.93	0.357	Retain H_0	No significant difference
Post-test	7.04	< 0.001	Reject H_0	Significant difference

Table 2 indicates that, in the pre-test analysis, there was virtually no discernible difference in the knowledge levels of the two groups before the intervention ($t = 0.93$, $p = .357$). This result confirms that respondents started from an equivalent baseline of learning, thereby providing a firm basis for attributing any later differences to the instructional treatment.

However, once the intervention was completed and the post-test administered, a pronounced gap emerged between the two cohorts. The t value rose to 7.04 while the p value fell to .000, demonstrating a statistically significant difference. This outcome clearly shows that the instructional materials and teaching method used with the experimental group exerted a meaningful impact on learning outcomes.

These findings align with Dela Cruz and Magsino (2021), who found that critical-thinking-oriented materials are more effective in raising academic achievement; such resources elevate scores while fostering deeper understanding. Consistent with their conclusions, the present study's experimental group recorded a markedly higher post-test mean.

By contrast, Ghaleb (2024) confirmed that highly teacher-centered strategies—such as those adopted by the conventional group—often result in rote or mechanical learning. Accordingly, it is unsurprising that this cohort's post-test mean remained virtually unchanged at 9.90.

The results extend beyond mere score increases. They demonstrate that the instructional materials served as a powerful tool for broadening understanding and cultivating more analytical and critical thinking. In short, the intervention produced beneficial effects not only on paper but in the learners' actual mastery of the content**.**

Three themes emerged from teacher interviews: scarce classroom technology, insufficient time, and uneven student participation.

Table 3.1: Challenges faced by Teachers Using the Instructional Material

Theme	Statements
Limited technology	*…Not every classroom has the technology we need, such as a television." (IDI P1)* *…it would be better if students could see the content on a screen." (IDI P2)* *…Beyond the module, we also need audio-visuals to carry out activities effectively." (IDI P3)*
Time Constraints	*…Many students request extra time for HOTS tasks, so the allotted period is not enough." (IDI P1)* *…We have to chase the MELCs set by DepEd, so the HOTS portion is often rushed." (IDI P2)* *…Even if I want to give students ample time, I can't because there is so much to finish." (IDI P3)*
Uneven participation	*…The module's activities are excellent for developing students' abilities, but some students no longer participate actively, especially when asked to share what they have learned from the text." (IDI P1)* *…During the performance task, students took a long time to complete the activity." (IDI P2)* *…There are students who do not contribute ideas and simply rely on the group leader." (IDI P3)*

Table 3.1 shows that, while teachers clearly recognize the value of instructional materials in fostering critical thinking, they also encounter obstacles when using these resources in the classroom. Analysis of interview transcripts revealed three principal barriers: limited access to technology, time constraints, and uneven student participation.

Participants reported a shortage of technological tools such as televisions, projectors, or display screens—that could have enriched discussion with instructional materials. They stressed that technology is vital in making lessons more engaging and meaningful. As several teachers explained:

"…Not every classroom has the technology we need, such as a television." (IDI P1)
"…It would be better if students could see the content on a screen." (IDI P2)
"…Beyond the module, we also need audio-visuals to carry out activities effectively." (IDI P3)

Under such conditions, teachers have limited means to provide visual representations of key concepts. Kassa et al. (2024) emphasize that integrating multimedia is essential for active student engagement; when equipment is lacking, the pedagogical impact of instructional materials is likewise constrained.

Teachers also cited insufficient time. Because they must cover numerous Most Essential Learning Competencies (MELCs), they cannot fully implement higher-order-thinking (HOTS) activities. Participants remarked:

"…Many students request extra time for HOTS tasks, so the allotted period is not enough." (IDI P1)
"…We have to chase the MELCs set by DepEd, so the HOTS portion is often rushed." (IDI P2)
"…Even if I want to give students ample time, I can't because there is so much to finish." (IDI P3)

This situation compromises learning quality. Dimalanta and Reyes (2022) note that adequate time for critical thinking is crucial for achieving higher levels of learning; when time is limited, teachers are forced to shorten—or skip—essential lesson components. No matter how well designed an instructional material is, its goal of cultivating critical thinking cannot be fully achieved without sufficient classroom time.

Finally, participants reported that unequal student engagement hampers learning. Some students failed to take part fully in activities embedded in the instructional materials, slowing the learning process. As teachers observed:

"…The module's activities are excellent for developing students' abilities, but some students no longer participate actively, especially when asked to share what they have learned from the text." (IDI P1)
"…During the performance task, students took a long time to complete the activity." (IDI P2)
"…There are students who do not contribute ideas and simply rely on the group leader." (IDI P3)

Ismail et al. (2023) affirm that cooperative learning depends not only on activity design but also on students' preferred learning approaches. When participation is low, the teacher's role becomes critical in orchestrating the class. Vygotsky (1978) likewise posits that learning is a social process in which the teacher, as the "more knowledgeable other," guides students' development.

Overall, the findings highlight those instructional materials are indeed powerful tools for stimulating critical and analytical thought; yet their effectiveness is moderated by technological availability, instructional time, and the extent to which students engage in the learning process.

Table 3.2: Challenges faced by Students Using the Instructional Material

Theme	Statements
Difficulty understanding	*…For me, Ma'am, the very first barrier is comprehension—understanding the lessons more deeply. When we use modules, especially during the pandemic, my biggest problem was gaining deeper understanding." (IDI P1)* *…It's hard to understand because the teacher doesn't explain it; we also don't fully grasp the words that are used." (IDI P3)* *…Those deep words, Ma'am, are really hard for me to understand." (IDI P4)*
No immediate teacher help	*…Sometimes I need to ask a question about the module, but it doesn't get answered right away. (IDI 2)* *…I can't immediately consult the teacher, Ma'am." (IDI P3)* *…Maybe our teacher could give us further explanations." (IDI P7)* *…With the module, if I have a question, there's no*

	teacher available to guide me on what to do." (IDI P5)
Technical or deep words	*...I struggle with the deep language used—the wording is so complex." (IDI P2)* *...It's harder when the Bisaya-Filipino text uses very deep words." (IDI P3)* *...Those new, very deep terms make it difficult." (IDI P7)*
Group-work issues	*...In group work, our groupmates just rely on us and don't really do anything." (IDI P3)* *...In groups, many members don't help; they just depend on others." (IDI P7)*
Weak internet / devices	*…Our internet isn't strong, and I don't have a laptop for editing. My phone's storage fills up quickly." (IDI P7)* *...Yes, we have internet now." (IDI P4)* *...Yes, we have a television—PowerPoint is possible, but only on that equipment." (IDI P3*

Table 3.2 summarizes the barriers students encounter when using instructional materials. Interview data surfaced five recurrent themes: (1) difficulty in achieving deep comprehension when studying modules on their own; (2) lack of immediate teacher guidance; (3) use of technical or "deep" vocabulary in the materials; (4) unequal participation during group tasks; and (5) limited access to technology.

Students consistently reported that they struggle to grasp lesson content at a deeper level—especially when working with modules independently. They attributed this to the absence of clear, detailed explanations and to the occasional use of complex terminology.

...For me, Ma'am, the very first barrier is comprehension—understanding the lessons more deeply. When we use modules, especially during the pandemic, my biggest problem was gaining deeper understanding." (IDI P1)
...It's hard to understand because the teacher doesn't explain it; we also don't fully grasp the words that are used." (IDI P3)
...Those deep words, Ma'am, are really hard for me to understand." (IDI P4)

These statements confirm Dela Cruz's (2023) observation that clear, accessible language is critical to student learning.

Participants also emphasized that when questions arise, they receive no prompt feedback, which hampers their ability to work through lessons on their own:

...Sometimes I need to ask a question about the module, but it doesn't get answered right away. (IDI 2)
...I can't immediately consult the teacher, Ma'am." (IDI P3)
...Maybe our teacher could give us further explanations." (IDI P7)
...With the module, if I have a question, there's no teacher available to guide me on what to do." (IDI P5)

These remarks align with Del-o and Bugtong (2023), who underscore the importance of timely feedback and active teacher support for effective learning.Students further noted that unfamiliar, highly technical terms impede comprehension:

...I struggle with the deep language used—the wording is so complex." (IDI P2)
...It's harder when the Bisaya-Filipino text uses very deep words." (IDI P3)
...Those new, very deep terms make it difficult." (IDI P7)

Again, Dela Cruz (2023) stresses that simple, appropriate language sustains student interest and understanding. Another barrier involved group activities where some members did not contribute:

...In group work, our groupmates just rely on us and don't really do anything." (IDI P3)
...In groups, many members don't help; they just depend on others." (IDI P7)

Del-o and Bugtong (2023) point out that success in collaborative tasks hinges on equitable distribution of roles and active participation from every member. Finally, students highlighted inadequate technological resources—poor internet connections and a lack of devices which hindered their ability to complete tasks efficiently:

…Our internet isn't strong, and I don't have a laptop for editing. My phone's storage fills up quickly." (IDI P7)
…Yes, we have internet now." (IDI P4)
…Yes, we have a television—PowerPoint is possible, but only on that equipment." (IDI P3)

These statements reinforce Del-o and Bugtong's (2023) conclusion that sufficient technological support is indispensable for students to benefit fully from modern instructional materials.

Table 4. Level of Acceptance of Teachers and Students Towards the Instructional Materials

Dimension	Evaluator	Mean	Adjectival Rating
Content	Student	4.62	Highly Acceptable
	Teacher	4.50	Acceptable
Relevance	Student	4.63	Highly Acceptable
	Teacher	4.58	Highly Acceptable
Engagement	Student	4.69	Highly Acceptable
	Teacher	4.64	Highly Acceptable
Organization	Student	4.74	Highly Acceptable
	Teacher	4.70	Highly Acceptable
Importance	Student	4.69	Highly Acceptable
	Teacher	4.67	Highly Acceptable
Overall Acceptance Level	Student	4.69	Highly Acceptable
	Teacher	4.68	Highly Acceptable

Legend:

Scale	Numerical	Description
5	4.51 – 5.00	Highly Acceptable
4	3.51 – 4.50	Acceptable
3	2.51 – 3.50	Moderately Acceptable
2	1.51 – 2.50	Partially Acceptable
1	1.00 – 1.50	Highly Unacceptable

Based on Table 4, the collected data plainly demonstrate the positive reception of both teachers and students toward the instructional material used in the study. The evaluation covered five key dimensions—*Content, Relevance, Engagement, Organization, and Importance.*

Students assigned the *Content* dimension a mean score of 4.62, interpreted as *Highly Acceptable*, whereas teachers gave it 4.50, or Acceptable. This slight disparity may stem from differing perspectives on the depth and breadth of the topics—a pattern consistent with Reyes and Santos (2020), who noted that acceptance of content hinges on its clarity and appropriateness for learners' abilities.

For *Relevance*, both groups rated the material *Highly Acceptable* which students rated mean of 4.63 and teachers 4.58, each falling within the *Highly Acceptable* band. These results indicate that the instructional resource

aligns effectively with the study's objectives and current educational needs, echoing Mendoza (2020), who emphasized that high relevance is a crucial factor in successful teaching-learning processes.

Engagement received the *Highly Acceptable* levels, with mean scores of 4.69 from students and 4.64 from teachers. This suggests that the material succeeded in stimulating interest and active participation an outcome consistent with Consoli et al. (2024), who argued that learner engagement is central to the success of any instructional resource, particularly when the goal is to elevate learning outcomes.

Organization also garnered top marks, earning 4.74 from students and 4.70 from teachers, signifying a clear, easy-to-follow structure. Guskey and Link (2022) contend that well-organized assessments and classroom tasks foster more effective development of students' critical-thinking skills. Proper structure allows learners to reflect on and adjust their understanding—an aspect vital to metacognition and deeper comprehension.

The *Importance* dimension likewise achieved *Highly Acceptable* means 4.69 (students) and 4.67 (teachers) showing that the material was perceived as highly valuable in meeting both academic and practical goals. As Consoli et al. (2024) point out, users' perceived value of a resource directly reflects its educational effectiveness.

In sum, the overall acceptance levels were nearly perfect: 4.69 for students and 4.68 for teachers. These uniformly high ratings affirm the instructional material's effectiveness as a teaching instrument and align with the findings of Consoli et al. (2024), who observed that high overall acceptance mirrors a resource's excellence in achieving intended learning outcomes.

Table 5. The Significant relationship Between Pre-test and Post-test mean scores and Students' Level of Acceptability of the instructional materials

	Experimental	**R coefficient**	**P value**	**Interpretation**
Students' Level of Acceptability	Pre- test score	-0.162	0.319	Not significant
	Post Test score	0.115	0.478	Not significant

Table 5 shows the correlation between the students' mean pre-test and post-test scores and their acceptance level of the instructional material. No significant relationships emerged. For the pre-test versus acceptance level, the Pearson r was –0.162 with a p value of 0.319. For the post-test versus acceptance, r was 0.115 with a p value of 0.478. Because both p values exceed the 0.05 significance threshold, neither correlation is statistically significant.

These findings indicate that students' acceptance of the instructional tool does not directly influence their test performance. Although they view the material positively, this attitude alone does not translate into higher scores. Acceptance appears to be just one factor among many that shape learning others include personal motivation, learning style, and instructional quality.

This result aligns with Hidayat et al. (2023), who reported that while many learners hold favorable views of online learning, such perceptions do not invariably lead to higher grades. In short, no matter how positively students respond to a resource, without active participation and meaningful interaction it is unlikely to boost classroom performance. Consequently, the use of instructional materials should be considered not only in terms of form and design but also in how effectively they energize teaching and promote active learning.

Based on these findings, the study recommends the development of an Enhanced Modular-Multimedia Learning Package (EMMLP) that focuses not merely on delivering information but also on nurturing students' understanding and skills.

5. CONCLUSION

The findings show that students in the experimental group—those who worked with the new, critical-thinking-focused materials and strategies—posted far stronger gains than their peers in the conventional group. In

short, instructional tools that actively develop analytical and reflective thinking translate into deeper comprehension and higher test scores.

An examination of pre-test and post-test data for both groups confirm this. Before the intervention, there was no meaningful difference between the two groups' performance. After the new material was introduced, however, a clear gap emerged: the experimental group's mean shot up, demonstrating the intervention's positive impact on their learning and understanding.

The finding shows teachers and students did run into obstacles. Teachers cited shortages of technology and time, along with uneven student participation. Students struggled with unfamiliar vocabulary, limited teacher guidance, and teamwork issues during group tasks.

Despite these challenges, both teachers and students gave the instructional material high marks on the acceptance survey—especially in the area of Organization, noting that the lessons flowed logically and were easy to follow. Interestingly, their enthusiasm did not directly correlate with the size of the students' test-score gains.

The results also underscore the teacher's pivotal role. Even when hurdles arise, teachers are the main drivers of successful implementation; their ongoing guidance and active involvement remain essential to elevating learning quality.

Finally, the study suggests that an Enhanced Modular-Multimedia Learning Package (EMMLP) could further boost teaching and learning. By blending print and digital resources—self-checking quizzes, video tutorials, and a detailed teacher's manual—the EMMLP would cater to schools with varying levels of technology while meeting both student and teacher needs across several learning dimensions.

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