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Batangas City's Research for Action Cognition, and Excellence

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Message

HON. MARIO VITTORIO A. MARIÑO
City Mayor

It is with great pride that I extend my warmest congratulations to the Schools Division of Batangas City on the forthcoming publication of the BRACE Research Journal. This milestone reflects the unwavering commitment of our educators and non-teaching personnel to pursue excellence through continuous learning, evidence-based practices, and transformative research.

Research is the heart of progress. It challenges us to question, discover, and innovate – allowing our schools to respond effectively to the evolving needs of our learners and our community. The successful granting of an ISSN by the National Library of the Philippines further affirms the credibility, quality, and national relevance of this journal. This is a testament to the dedication of the entire DepEd Batangas City family.

The city government remains steadfast in supporting initiatives that elevate the quality of education and empower our teachers to lead with insight and integrity. We recognize your vital role in shaping informed citizens, nurturing critical thinkers, and strengthening the foundations of a future-ready Batangas City.

To all contributors, researchers, and leaders behind this publication – thank you for your passion and perseverance. May this journal continue to inspire innovation, collaboration, and a deeper commitment to educational excellence.

Together, let us keep building a community where learning thrives, ideas flourish, and every Batangueno child is given the opportunity to succeed.
Mabuhay ang DepEd Batangas City! Mabuhay ang ating mga educators!

HON. MARIO VITTORIO "MARVEY" A. MARIÑO
City Mayor

Message

HERMOGENES M. PANGANIBAN, CESO V
Schools Division Superintendent

"The important thing is to never stop questioning. Curiosity has its own reason for existence." -Albert Einstein-

Our research initiatives within the Schools Division Office of Batangas City are not just academic exercises; they are vital instruments for creating a positive and measurable impact on both our teaching and non-teaching personnel. This commitment stems from our singular goal: to deliver the highest quality services to our clients, most especially our learners.

By meticulously comparing our intended Key Result Areas and strategic objectives against our actual accomplishments, we confirm the essential role of research. The robust findings and concrete conclusions generated by our studies provide the data-driven foundation necessary to effect strategic adjustments and continuous improvements.

We stand today at a higher echelon of organizational maturity, where the entire personnel fully understand the importance of research in elevating our institutional performance. Critically, we have transitioned to a culture where research is conducted not merely for personal advancement, but as a direct contribution to the improvement of public service delivery.

I extend my sincere gratitude to the BRACE Journal Research Committee for spearheading this issue and for the pivotal action of securing the International Standard Serial Number (ISSN). This achievement provides our scholarly work with a unique, internationally recognized identifier, streamlining distribution and inventory, and ensuring that our contributions are accurately identified and tracked by libraries worldwide.

May this journal not only inspire our researchers by recognizing and valuing their initiatives but also serve as a tangible embodiment of our collective commitment toward genuine, data-driven decision-making across the Schools Division Office.

"Without change, there is no innovation, creativity, or incentive for improvement. Those who initiate change will have a better opportunity to manage the change that is inevitable." -William Pollard-

HERMOGENES M. PANGANIBAN, CESO V
Schools Division Superintendent

Message

CATHERINE V. MARANAN, EdD
Assistant Schools Division Superintendent

"Gratitude is the memory of the heart and music of the soul."

Indeed, this BRACE (Batangas City's Research for Action, Cognition, and Excellence) Journal is a Milestone and Breakthrough! The collaboration of the minds among the SDO teaching and non-teaching personnel through research and innovation is the ultimate promise and manifestation of the deepest compassion and commitment for excellence in the delivery of quality basic education to Batangueño learners.

The greatest aspirations for the learners and optimum quest for truth thrive through research and continuous improvement. The practical application and actual operation of the theories and concepts studied and literature reviews via the research process are significantly fueled with vibrant and trivial phenomena of success and triumph.

May this exemplary endeavor continuously ignite the passion of love and commitment to go far and beyond the unimaginable masterpiece of unveiling "Fortress of Success of the entire SDO DepEd Batangas City family".

CATHERINE V. MARANAN, EdD
Assistant Schools Division Superintendent

Message

ANGELISA A. AMOTO, PhD
Chief Education Supervisor – SGOD

This research publication serves as a heartfelt tribute to our Schools Division's unwavering dedication to learning, integrity, and ongoing development. Every study featured within these pages reflects the passion of educators who tirelessly work to transform aspirations into realities—turning daily challenges into valuable opportunities. Our researchers are builders of a brighter future, fueled by curiosity, purpose, and a genuine desire to uplift every learner. Their quest for new insights paves the way for solutions to educational challenges and addresses the evolving needs of our schools and communities.

As we continue to pursue our collective mission, let us move forward with compassion, humility, and a strong sense of purpose. Research does more than provide information—it fosters transformation, reinforces our vision, and motivates us to serve with renewed dedication. Thank you for the heart and effort dedicated to this work, for the quiet ways contributed to our division's progress, and for choosing each day to make a difference. Our educators' commitment is recognized, valued, and deeply appreciated.

Congratulations, SDO Batangas City! Keep soaring, passionate researchers!

ANGELISA A. AMOTO, PhD
Chief Education Supervisor - SGOD

Message

SACORO R. COMIA, PhD
Chief Education Supervisor – CID

It is with immense pride and a deep sense of purpose that this research journal features several aspects in the field of education. This masterpiece also features a study on curriculum and instruction—an important compendium of studies that reflects our collective commitment to continuous improvement, evidence-informed decision-making, and transformative learning for all.

In the Curriculum Implementation Division (CID), we believe that research is not merely an academic exercise but a vital force that strengthens instructional practices, informs policy directions, and shapes the future of our learners. Each study featured in this journal embodies the passion and reflective spirit of our educators, school leaders, and researchers who tirelessly work to ensure that teaching and learning remain relevant, responsive, and empowering.

As we face the evolving demands of the 21st century, this journal serves as a testament to our ongoing dedication to excellence. The insights and innovations contained within these pages provide meaningful contributions toward enhancing curriculum delivery, enriching classroom experiences, and fostering a culture of research in our schools.

I commend all contributors, researchers, mentors, and advocates who have invested their time, expertise, and commitment in this endeavor. May this publication inspire more educators to inquire, explore, and innovate for the benefit of every learner we serve.

Let this journal be both a mirror of our present realities and a beacon guiding us toward a more inclusive, dynamic, and forward-looking education system.

SACORO R. COMIA, PhD
Chief Education Supervisor – CID

FOREWORD

Education stands as the cornerstone of human development, shaping both individuals and societies. To ensure that schools remain responsive to the evolving needs of learners and communities, research in education plays a vital role. It provides the evidence and insights necessary to guide actions, inform decisions, and sustain meaningful progress.

This research journal, **BRACE: Batangas City's Research for Action, Cognition, and Excellence**, embodies the collective efforts of the teaching and non-teaching personnel of the Schools Division of Batangas City in championing a culture of research within their workplaces. It underscores the importance of research as a guiding light—illuminating every initiative that nurtures the cognition of learners and stakeholders, while advancing excellence in the delivery of quality and relevant basic education.

Indeed, research in education is not merely an academic exercise; it is a transformative tool that shapes the future of learning. By grounding decisions in evidence, schools foster innovation, inclusivity, and excellence. As education continues to evolve, research remains the compass that ensures progress is both meaningful and sustainable.

The contributions featured in this journal reflect a multi-themed research agenda encompassing teaching and learning, governance, child protection, human resource development, and other cross-cutting concerns within the educational landscape. Collectively, these studies enrich the existing body of knowledge and address emerging contemporary issues and challenges in education.

As a research-driven institution, the Schools Division of Batangas City hopes that this journal will serve as a valuable resource—providing effective findings that contribute to the growth of the division and advancing knowledge as reflected in its **WAY 4 ALA EH** practices. This publication stands as a testament to the division's commitment to cultivating a strong research culture and to ensuring that education in Batangas City continues to thrive with relevance, rigor, and excellence.

MARC ELMER M. PEREZ, EdD
Senior Education Program Specialist – Planning and Research

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A VIEW FROM THE FLIP SIDE: INVERTING THE LECTURE–HOMEWORK DYNAMIC WITH STUDENT-CENTERED ACTIVE LEARNING

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Abstract: This study explored the impact of flipped classroom model on engagement and academic performance among eighth-grade Mathematics students at Libjo National High School. Traditional teaching generally follows a "lecture-first, homework-later" approach, which can limit student engagement and comprehension. To address this issue, Project FLIP (Fostering Learning through Interactive Practices), a student-centered approach that encourages active learning, was applied. The researcher used multiple data sources of data, including surveys, focus group discussions, classroom observations, and pre- and post-tests to evaluate the effectiveness of this method. The results showed improvements in students' conceptual understanding, behavioral engagement, and perceived learning outcomes. Furthermore, the study revealed several challenges in implementation including limited student internet access, the time-consuming production of high-quality video lessons, and students' unfamiliarity with self-directed learning. These limitations, along with the need for teacher training and parental awareness building, highlight the practical obstacles to fully leveraging the advantages of the flipped classroom in mathematics instruction. Several reinforcement activities are proposed to support the continued integration of the flipped classroom model into mathematics classroom teaching.

Keywords: active learning, digital pedagogy, flipped classroom, mathematics instruction, student engagement

INTRODUCTION

Learning Mathematics is a complex and cognitive endeavor, that can be extremely intimidating to students, since it entails significant effort from them. Therefore, these students require an enormous amount of motivating support in

order to navigate the subject. Thus, it is of utmost importance for educators to develop pedagogical methods that are fun and engaging.

In the past years, teachers have encountered obstacles in their attempt to plan and seek new knowledge and innovative processes to ascertain the effectiveness of their education supplied to students. It is still an essential duty of teachers to do what they can to develop new methods and strategies to ensure the teaching and learning process is reflected in the students' learning. Teachers are often having to emulate innovative methods even using new technology to engage students, while simultaneously figuring out how to teach students who are probably not very experienced or involved in this learning environment. Also, academically challenged learners and their families can have their learning voices stifled by the pressure of moving to a new educational space.

The goal of the revised K-12 curriculum is to enhance learning outcomes by introducing new strategies that meet the needs of every student. One key strategy is to invert the traditional lecture-and-assignment model. This model changes the traditional teaching method where students passively listen to lectures and complete exercises at home. Instead, the focus now is on engaging students actively in classroom activities so that teachers can help and guide them to understand the lesson more deeply. The teacher can then provide students with more opportunities to learn as they collaborate with their classmates.

At Libjo National High School, Mathematics remains the lowest-performing subject in terms of Mean Percentage Score (MPS) based on quarterly examinations. The MPS results are as follows: Quarter 1 – 42.35, Quarter 2 – 43.13, Quarter 3 – 52.80, and Quarter 4 – 47.64, with a final MPS of only 46.48. These persistently low performance indicators call attention to the urgent need for pedagogical innovations in the delivery of Mathematics instruction, particularly those that offer students more interactive, student-centered, and technologically supported learning experiences.

Additionally, reversing the lecture-homework dynamic presents opportunities for active learning which turns the classroom setting into interactive learning, it transforms classroom time into constructive learning, problem solving, and collaborative projects as students work together with their peers. It moves the classroom from the passive reception of new content into where active participation is taking place and thinking critically about the content for better understanding of Mathematics. However, this may not occur without technology involvement because many students would likely use technology to

prepare for class through asynchronous 'lecture' that relate to the lesson and discussion they will have in the classroom.

On the other hand, employing technology provided an opportunity for teachers to remove the lecture component from the in-classroom situation to help facilitate a meaningful lesson-discussion in class, and promote personalized learning based on the individual student. As educators in public secondary schools' search for possible means and innovative practices to close the achievement gaps in Mathematics, collaboration, critical thinking, creativity, and communication with technological tools are needed.

Nowadays, with technology developing at an increasing pace, teachers search for the best practices and strategies to leverage new technologies to enhance student achievement. Avery, et al. (2018) state that, " Educators need to consider the changes in society and the rapidity of these changes, by instigating new teaching and learning styles that match 21st century thinking, acting and being". The flipped classroom is one such emerging style of instruction that meets the needs of the modern student.

Furthermore, the flipped classroom model used in this study follows the instructional framework developed by Bergmann and Sams (2012), in which direct instruction is delivered through teacher-created videos or digital materials accessed by students outside the classroom, while in-class time is dedicated to guided practice, problem-solving, and collaborative activities. This approach aligns with educational movements that emphasize student-centered learning and purposeful technology integration. In line with the goals of the Revised K–12 curriculum, the model leverages digital platforms to provide equitable access to learning materials regardless of students' location, pace, or learning needs. By offering flexible content access and maximizing interactive engagement during class sessions, this flipped classroom framework promotes a more inclusive and equitable mathematics learning environment.

As education continues to change, the new curriculum has the potential to innovate teaching practices that articulate student-centered pedagogy and enables students to be successful in mathematics and other subjects.

Currently, many learners perceive Mathematics to be a difficult subject to understand. There are different instructional strategies that have been used and implemented by Mathematics teachers in the way the teaching-learning process is implemented. However, there is a wealth of information concerning student engagement that deserves to be investigated further. For this reason, the

researcher a Mathematics educator in one of the public secondary schools within the Division of Batangas City felt compelled to pursue this study as it will determine if using flipped classroom learning improves high school students' performance in Mathematics.

This study aims to explore the impact of the flipped classroom approach on student learning and engagement in Mathematics. It focuses on how reversing the traditional "lecture-first, homework-later" structure affects conceptual understanding, influences behavioral, cognitive, and emotional engagement, shapes students' perceptions of clarity, pacing, motivation, and learning effectiveness, identifies challenges faced by teachers in implementing this approach, and proposes enhancement activities to support richer student outcomes.

Literature Review

Over the past decade, the flipped classroom model has emerged as an influential innovation in education. Grounded in constructivist and learner-centered principles, it reverses the conventional approach of "lecture first, homework later." In this approach, the students go through lecture materials at home, before they even step into the classroom. This usually involves watching videos or reading articles, leaving class time for engaging, collaborative, and more advanced learning activities. This shift in teaching style encourages a deeper understanding of concepts, fosters independence among learners, and boosts active participation of students.

Conceptual Foundations of the Flipped Classroom

The flipped classroom is a teaching method that inverts the traditional flow of teaching and learning process. Instead of students sitting through lectures to learn new concepts inside the classroom, they were tasked to study the instructional materials like recorded videos or lectures from the comfort of their homes first.

Classroom sessions are now used for bringing concepts to real-life application. This is where teachers are providing engaging discussions, problem-solving tasks and promoting teamwork among students. According to Bergmann and Sams (2012), the pioneers of this approach, this method allows teachers to connect with every student in every class every day. This is by turning class time

into a chance for students to have a deeper engagement and personalized support.

Specifically, the flipped classroom model inverts the traditional lecture-homework structure by delivering direct instruction through teacher-created videos or digital materials that students access outside the classroom. This allows class time to be used for interactive learning, collaborative problem-solving, and individualized guidance, enabling teachers to facilitate understanding, monitor progress, and support higher-order thinking skills for every student.

The Flipped Learning Network (2014) took this idea further by introducing the Four Pillars of F.L.I.P.. These are Flexible Environment, Learning Culture, Intentional Content, and Professional Educator. The four pillars highlight that effective flipped instruction is about well-planned teaching activities for students rather than just the technology used.

Bishop and Verleger (2013) described the flipped classroom as a combination of in-class interactive group activities and out-of-class computer-assisted instruction. They noted that this instructional design is rooted in constructivist and active learning principles, emphasizing that students construct knowledge through active participation and collaboration.

Similarly, Strayer (2012) found that students in flipped classroom environments exhibited higher levels of collaboration, creativity, and engagement with tasks. This suggests that the model enhances the social and cognitive aspects of learning. In summary, these findings indicate that the flipped classroom is a truly student-centered teaching approach, rather than merely a readjustment of the teaching model.

Based on this concept, Kapur et al. (2022) proposed a more dynamic flipped classroom model, which they described as "failure, flip, correct, and feedback." This cycle emphasizes the importance of effective failure and iterative feedback. These demonstrate that meaningful learning occurs when students face cognitive challenges and progressively master knowledge.

This further emphasizes that an effective flipped classroom is more than just changing the arrangement of lectures and assignments. It requires thoughtful planning and design to encourage student self-directed learning. This concept aligns with Education and Skills Vision 2030 (OECD, 2018), which advocates for teaching methods centered on learner involvement, adaptability, and problem-solving skills—essential skills for success in the 21st century. The

development of the flipped classroom reflects a trend towards more flexible, reflective, and student-centered learning environments.

Flipped Classroom Design for Conceptual Understanding in Mathematics

Successfully implementing a flipped classroom in mathematics teaching is not simply a matter of changing the teaching model. It requires carefully designed and integrated pre-class and in-class learning content.

Lo et al (2017), in their meta-analysis, identified three crucial design principles that truly make a difference. First, the materials students use at home must be relevant to classroom activities. Second, constructing learning scaffolds is key to guiding students' cognitive processes. Finally, providing students with opportunities to explain concepts to their peers is also highly beneficial.

Their research shows that learners gain a deeper understanding of concepts when pre-class videos clearly articulate the concepts that will be explored later through more complex problem-solving tasks.

Therefore, in flipped classrooms for mathematics, the focus should shift from simply practicing problem-solving steps to encouraging conceptual reasoning through structured inquiry-based activities, thereby fostering critical thinking and teamwork. Research supports this view.

O'Flaherty and Phillips (2015) found that when the flipped classroom model was combined with guided discussion and practical application, students' grasp of concepts and retention of knowledge significantly improved. Betihavas et al. (2016) expressed a similar view, noting that integrating active learning strategies into the flipped classroom helps students bridge the gap between theory and practice and enriches their understanding through real-life experiences.

These studies suggest that improving mathematical comprehension is not merely about reversing the order of instruction, but more importantly, about carefully designing learning experiences that connect pre-class exploration with classroom interaction.

However, the flipped classroom model is not without challenges. Akçayır (2018) points out that if pre-class materials are insufficient or classroom activities fail to encourage deeper analytical thinking, students may only scratch the surface of understanding.

Nielsen (2012) argues that the key to a successful flipped classroom lies in producing clear and purposeful instructional videos directly related to the classroom objectives.

For mathematics teachers, the key to effectively utilizing the flipped classroom model lies not only in the flipped classroom itself, but also in designing a well-thought-out, purposeful learning path that helps students build a solid foundation and ultimately understand the relevant concepts.

Student Engagement in Flipped Classrooms

Engagement is a vital part of the flipped learning approach, covering behavioral, cognitive, and emotional aspects. Behavioral engagement is all about how actively students participate and put effort into their learning activities during class. Research by Gilboy, Heinerichs, and Pazzaglia (2015) shows that flipped classrooms boost this kind of engagement by offering more chances for interaction and immediate feedback during lessons.

Similarly, Avery et al. (2018) found that high school students were more involved when lessons included collaborative tasks and tech-driven exploration. These insights suggest that moving lecture content outside the classroom allows teachers to transform class time into interactive, student-focused learning experiences that encourage ongoing engagement.

Cognitive engagement, on the flip side, refers to the mental effort and self-regulation strategies students use to grasp and process information. Akçayır (2018) highlighted that flipped learning settings require students to take more responsibility for their learning. This means they need to actively engage with materials before class. When students approach these resources with intention, they come to class ready to tackle more complex tasks like problem-solving, evaluation, and synthesis (Lo et al., 2017).

While some students may struggle to handle their independence without enough guidance, Kapur et al. (2022) highlight how crucial it is to have structured support and timely feedback to turn cognitive effort into meaningful learning experiences.

Emotional engagement, encompassing interest, motivation, and enjoyment, also thrives in well-designed flipped classrooms. Avery et al. (2018) found that students showed more enthusiasm and confidence during flipped math lessons, linking this emotional engagement to a greater sense of ownership over their learning.

Similarly, Gilboy et al. (2015) discovered that students appreciated the collaborative and active aspects of flipped sessions, finding them more engaging and less tedious than traditional lectures. However, Nielsen (2012) warns that

overly lengthy or confusing pre-class videos can frustrate learners and reduce their emotional engagement.

These insights underscore the need to strike a balance between challenge and clarity to keep motivation high and ensure a positive learning experience in flipped classrooms.

Student and Teacher Perceptions of the Flipped Approach

Students' views on clarity, pacing, and motivation are crucial for the success of flipped classrooms. A study by Gilboy et al. (2015) highlighted that learners appreciated the structured and well-paced nature of flipped lessons, especially when the pre-class videos were short and focused on essential concepts.

In a similar point, O'Flaherty and Phillips (2015) discovered that students found flipped learning effective when they had the ability to control the speed of instructional videos and revisit challenging material whenever they needed to. These insights align with the flexible learning environments principle outlined by the Flipped Learning Network (2014), which emphasizes that students thrive when they can engage with content at a pace that suits their individual needs.

Motivation also plays a significant role and is influenced by how effective students perceive the model to be. Avery et al. (2018) noted that learners showed greater motivation when they experienced real learning progress and had opportunities to collaborate during in-class activities.

Akçayır (2018) further pointed out that motivation tends to rise when pre-class materials are engaging and clearly linked to in-class tasks, which helps foster a sense of agency and responsibility among learners. Conversely, unclear or poorly integrated materials can lead to a drop in motivation, highlighting the need for coherent instructional sequencing to keep students engaged.

Additionally, teachers' views on flipped classrooms reveal a mix of optimism and caution. Betihavas et al. (2016) and O'Flaherty and Phillips (2015) identified preparation time and technological demands as significant challenges, including the necessity to create high-quality videos, ensure accountability for pre-class work, and facilitate more interactive classroom sessions.

Bishop and Verleger (2013) pointed out that aligning assessments with flipped instruction can be quite tricky. However, most teachers see the value in this model, as it allows for more personalized support and deeper engagement

with students. This really underscores the need for strong institutional support and professional development to make flipped classrooms work effectively.

Challenges and Enhancement Strategies in Implementing Flipped Classrooms

When it comes to implementing flipped classrooms, there are definitely some hurdles to overcome. Akçayır (2018) noted that both students and teachers often face challenges with time management, internet access, and keeping motivation high for pre-class assignments.

Betihavas et al. (2016) added that teachers need a good amount of prep time to create instructional videos and redesign activities for the flipped format. Bishop and Verleger (2013) also raised concerns about equity, highlighting that students without reliable tech access might find it harder to participate. These issues really emphasize how crucial institutional support is for both teachers and students to ensure that the implementation is inclusive and effective.

To tackle these challenges, researchers have come up with some useful strategies. Lo et al. (2017) suggested that pre-class materials should be closely aligned with in-class activities and that formative assessments should be used to gauge understanding.

Similarly, Gilboy et al. (2015) recommended using short, focused videos with embedded questions to boost accountability and comprehension. The Flipped Learning Network (2014) highlighted the importance of flexible learning environments that cater to different preferences, encourage collaboration, and rely on active teacher facilitation. Avery et al. (2018) further emphasized that ongoing teacher feedback and opportunities for student reflection can significantly enhance engagement and learning outcomes.

Recently, Kapur and colleagues (2022) introduced an innovative model called "fail, flip, fix, and feed." This model combines the concepts of productive failure and iterative feedback within a flipped learning cycle. By encouraging students to tackle complex problems before formal instruction, teachers can facilitate meaningful cognitive challenges, followed by guided reflection and conceptual understanding.

This method resonates with the OECD's (2018) recommendation for teaching strategies that nurture adaptive learners who are skilled in problem-solving and self-assessment. To create a successful flipped classroom, it's essential to have thoughtful instructional design, technological readiness, and

metacognitive support, especially to enhance learning outcomes in mathematics education.

Research Questions

This study aimed to explore the impact of the flipped classroom approach on student learning and engagement in Mathematics. Specifically, it sought to answer the following questions:

1. How does reversing the traditional "lecture-first, homework-later" structure affect students' conceptual understanding of key mathematics topics?

2. How does the flipped approach influence student engagement during mathematics lessons in terms of:

   2.1 behavioral;

   2.2 cognitive; and

   2.3 emotional aspect?

3. What are students' perceptions regarding this reverse-paradigm model including its

   3.1 clarity;

   3.2 pacing;

   3.3 motivation; and

   3.4 perceived learning effectiveness?

4. What challenges do teachers identify when implementing this reversed lecture-homework structure in their math instruction?

5. What enhancement activities may be designed to foster richer student outputs in a flipped Math classroom?

METHODOLOGY

This study employed a mixed-methods research design, combining quantitative and qualitative approaches to explore how Project FLIP affects Grade 8 Mathematics students' learning and engagement. Quantitative methods, such as pre- and post-tests and engagement surveys, provided measurable evidence of learning outcomes, while qualitative methods, including interviews, teacher reflections, and classroom observations, offered insights into students' experiences and motivations. Integrating both approaches allowed the researcher to capture not only what occurs in the classroom but also the reasons behind. This can provide a comprehensive understanding of the flipped classroom intervention (Creswell, 2014).

Participants were Grade 8 Mathematics students at Libjo National High School, Division of Batangas City. A total of 90 students were selected using convenience sampling, ensuring they had prior exposure to traditional instruction but had not experienced a flipped classroom.

The intervention utilized teacher-created video lectures, digital learning modules, and interactive worksheets aligned with the curriculum. Students studied materials at home, while class sessions were used on problem-solving, collaborative activities, and guided discussions. The study followed cycles of planning, acting, observing, and reflecting, allowing the researcher to refine the intervention based on student performance and engagement.

Ethical considerations for this study included securing informed consent from the students' parents or guardians, ensuring that learners participated voluntarily, and maintaining the confidentiality and anonymity of all participant information. In addition, approval for the study was obtained from the school head. The participants were informed of their right to withdraw from the study at any time without any negative consequence. These measures ensured that the research was conducted in accordance with ethical standards and protected the rights and welfare of all participants.

Research design

This study employed a mixed-methods action research design, which combined quantitative and qualitative approaches to provide a comprehensive understanding of the effects of the FLIP intervention on Grade 8 Mathematics students. A variety of tools were used to gather both types of data. The quantitative measures included pre- and post-tests to evaluate conceptual understanding, along with engagement survey that captured behavioral, cognitive, and emotional aspects. For qualitative data, semi-structured focus group interviews, teacher reflection logs, and observational journals were utilized.

Data collection followed a structured sequence, beginning with baseline assessments, followed by an eight-week implementation of the FLIP intervention accompanied by enhancement activities. After the intervention, post-tests, engagement surveys, and focus group interviews were conducted to gather post-intervention data. This sequential approach allowed for both comparative and in-depth analysis of student learning and engagement outcomes.

Research instruments

To gather the necessary data for the study, several instruments were utilized. Pre- and post-tests were administered to evaluate students' understanding of essential math concepts before and after introducing the flipped classroom model. Additionally, an engagement survey was used to measure students' behavioral, cognitive, and emotional involvement during math lessons.

To dive deeper into student experiences, focus group interviews were conducted to capture their thoughts on clarity, pacing, motivation, and how effective they felt the flipped model was for their learning. Moreover, the teacher reflection logs and classroom observation notes documented the implementation process, any challenges faced, and adjustments made throughout the study.

Data Analysis

Both quantitative and qualitative data were systematically analyzed to evaluate how effective the flipped classroom model was in enhancing students' math performance and engagement. The analysis included descriptive statistics such as mean scores, frequencies, and percentage comparisons to track changes in students' understanding and engagement levels before and after the flipped classroom intervention. The main goal of this data analysis was to identify trends and determine the percentage of increase or decrease in students' performance and engagement.

A four-point Likert scale was utilized to score all responses to the questionnaire items. Each item score was assigned a weight value from 1 to 4 which represented the lowest score to the highest score. There were verbal descriptive interpretations provided for the meaning of each score.

Scale	Range	Verbal Interpretation
4	3.5 - 4.00	Strongly Agree
3	2.50 - 3.49	Agree
2	1.5 - 2.49	Disagree
1	1.00 - 1.49	Strongly Disagree

On the other hand, the test scores of the respondents were interpreted as high, average, below average, low and very low.

Score Range	Verbal Interpretation
21-30	High
16-20	Average
12-15	Below Average
9-11	Low
8 and below	Very Low

In this study, qualitative data were gathered from interviews, reflection logs, and observation journals. The responses were analyzed descriptively, summarizing key ideas, observations, and recurring behaviors. By combining these qualitative insights with quantitative data, a more comprehensive understanding of how the flipped classroom model influenced student learning and the overall classroom environment was obtained.

RESULTS AND DISCUSSION

This section presents the findings of the study based on the data collected from pre- and post-tests, engagement surveys, focus group interviews, teacher reflection logs, and observations.

1. Effects on Conceptual Understanding

The researcher examined how students from both groups performed when it came to operations on polynomials.

The pretest results showed that a notable number of students in both the control and experimental groups faced challenges with polynomial operations before the intervention. In the control group, 19 out of 45 students (42%) were classified as Low performers, while 7 students (16%) fell into the Very Low category. Similarly, in the experimental group, 15 students (33%) were at the Low level, and 10 students (22%) scored as Very Low. These two performance levels were the most common in both groups, indicating that many students initially struggled with the foundational concepts of the topic.

A small number of students from both groups showed a stronger grasp of the concepts, with only 4 students (9%) from each group reaching a High performance level. The number of students who fell into the Average or Below Average categories was also low, suggesting that most were grouped together in the lower performance tiers.

Table 1

Grade 8 Students' Pretest Scores

Level	Control Group			Experimental Group		
	Frequency	Percentage	Rank	Frequency	Percentage	Rank
Very Low	7	16%	3	10	22%	3
Low	19	42%	1	15	33%	1
Below Average	9	20%	2	11	24%	2
Average	6	13%	4	5	11%	4
High	4	9%	5	4	9%	5
TOTAL	**45**	**100%**		**45**	**100%**	

These numbers pointed to both groups starting at a fairly similar academic level, with not much prior knowledge of polynomial operations.

The results from the posttest showed a significant boost in student performance across both groups, with the experimental group experiencing a greater increase in scores after adopting the flipped classroom model.

In the control group, most students, 17 out of 45, or 38%, were categorized as Below Average. Following them were 13 students (29%) who reached the Average level, and 9 students (20%) who performed at a High level. A small group of 6 students (13%) remained in the Low category, but no one scored in the Very Low range, which suggests a slight improvement compared to the pretest.

Table 2

Grade 8 Students' Posttest Scores

Level	Control Group			Experimental Group		
	Frequency	Percentage	Rank	Frequency	Percentage	Rank
Very Low	0	0%	5	0	0%	5
Low	6	13%	4	2	4%	4
Below Average	17	38%	1	4	9%	3
Average	13	29%	2	20	44%	2
High	9	20%	3	19	42%	1
TOTAL	**45**	**100%**	**TOTAL**	**45**	**100%**	**TOTAL**

On the other hand, the experimental group clearly demonstrated a change towards better performance. The number of students in the High level category

increased significantly, with 19 students (42%) achieving this score, up from just 4 students (9%) in the pretest. Additionally, the Average category saw an increase to 20 students (44%), which is more than four times the pretest number. Only 4 students (9%) stayed in the Below Average category, and just 2 students (4%) were in the Low category. Remarkably, no student in the experimental group fell into the Very Low range.

These findings suggest that the flipped classroom approach positively impacted students' conceptual understanding. Those who participated in this model moved from lower performance levels to higher ones, with a noticeable increase in both the Average and High categories.

The changes observed were not just about better test scores, they also reflected an improvement in student confidence and independence. The flipped classroom model fostered an atmosphere where students could truly take charge of their learning.

This setup allowed them to build a solid understanding at home, making it easier to apply what they learned in school. The noticeable drop in Very Low and Low scores, together with a significant rise in High and Average performers, clearly demonstrated how effective the flipped classroom is in enhancing conceptual understanding for our Grade 8 students.

2. Influence of the Flipped Approach on Student Engagement

Surveys and observations of the class showed significant increases in student engagement across three key areas: behavioral, cognitive, and emotional.

In terms of behavioral engagement, a greater number of students participated in group tasks and discussions after implementing the flipped classroom approach. When it came to cognitive engagement, students showed deeper reasoning skills, and their analyses and problem-solving abilities reflected a stronger grasp of mathematical concepts.

On the emotional side, students displayed increased motivation and confidence during math lessons, while the teacher-participants noticed a decline in visible anxiety and hesitation. These results suggest that the flipped classroom not only strengthened academic understanding but also had a positive impact on students' overall attitudes and behaviors towards learning math.

2.1 Behavioral Engagement of Students in the Flipped Mathematics Classroom. According to the data in Table 3, the flipped classroom approach significantly enhanced students' behavioral engagement in mathematics. The

average score of 3.56, which falls under Strongly Agree, indicates that students were actively involved in class activities, tasks, and they took responsibility for their own learning.

The highest-rated indicator was "I actively participate in group tasks during math class" which scored a solid 3.72. This suggests that students are really engaged when it comes to collaborative learning. A big part of this enthusiasm comes from their earlier exposure to the material through videos, which boosts their confidence and readiness.

Other statements like "I attend math classes regularly" (3.68) and "I am attentive when my classmates or teacher are explaining" (3.61) highlight the importance of being present and focused during class, key aspects of staying engaged. Additionally, the scores for task completion and problem-solving initiatives that are ranging from 3.54 to 3.56 further stress how involved the students are.

Table 3

Behavioral Engagement of Students in the Flipped Mathematics Classroom

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I actively participate in group tasks during math class.	3.72	Strongly Agree	1
2. I attend math classes regularly.	3.68	Strongly Agree	2
3. I complete the tasks during flipped classroom sessions.	3.54	Strongly Agree	5
4. I follow the classroom rules and procedures.	3.50	Strongly Agree	6
5. I am attentive when my classmates or teacher are explaining.	3.61	Strongly Agree	3
6. I take initiative in solving exercises during class time.	3.56	Strongly Agree	4
7. I participate in math-related games and activities enthusiastically.	3.48	Agree	7
8. I bring needed materials for flipped lessons (notes, gadgets, etc.).	3.42	Agree	8
Composite Mean	**3.56**	**Strongly Agree**	

Although slightly lower, the statements "I participate in math-related games" (3.48) and "I bring needed materials" (3.42) still received Agree ratings, suggesting areas where consistent habits can still be developed.

Students also described the benefits of this setup on their classroom behavior:

> *"Mas okay kapag alam mo na muna ang topic bago ito ipaliwanag ng guro. Mas confident akong sumagot at magparticipate sa mga activities."* – S1

> *"Napanood ko na ang video sa bahay, kaya may idea na ako. Kaya sa mga activity, handa na akong makilahok dahil may alam na ako sa lesson."* – S2

The teacher observations confirmed these comments. One teacher remarked:

> *" Malaki ang pagkakaiba sa behavior ng mga estudyante. Mas alerto at active na nakikilahok na sila. Kahit ang mga tahimik noon sa klase ay sumasali na sa group activities at recitation."* – T1

The findings clearly showed that the flipped classroom approach encouraged students to take responsibility, participate actively, and be better prepared. By moving direct instruction to their own learning space, students had more chances to engage meaningfully during class, which resulted in enhanced behavioral engagement and improved learning dynamics.

2.2 Cognitive Engagement of Students in the Flipped Mathematics Classroom. Students in the flipped classroom exhibited strong cognitive engagement. This was reflected in a composite mean score of 3.77, which was interpreted as Strongly Agree. This indicates that learners were not just passively absorbing information, they were actively processing mathematical concepts, applying strategies, and diving deeper into their thinking throughout the learning experience.

The highest-rated statement was "I work hard to improve my understanding of the topics". This got the weighted mean of 3.88, suggesting that students were genuinely motivated to fully grasp the lessons. Close behind were "I try to understand the math concepts before class through the videos" (3.85) and "I ask questions when I do not understand something" (3.83). These results showcased how students were taking initiative and becoming more self-directed in their learning journey.

Table 4

Cognitive Engagement of Students in the Flipped Mathematics Classroom

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I try to understand the math concepts before class through the videos.	3.85	Strongly Agree	2
2. I ask questions when I do not understand something in the video or class.	3.83	Strongly Agree	3
3. I am able to relate the video content to real-life math problems.	3.70	Strongly Agree	6
4. I work hard to improve my understanding of the topics.	3.88	Strongly Agree	1
5. I remember the concepts better when I study them before class.	3.75	Strongly Agree	5
6. I use problem-solving strategies taught in the video during in-class tasks.	3.80	Strongly Agree	4
7. I take notes while watching the video lessons.	3.65	Strongly Agree	8
8. I try to explain my thinking when solving problems in class.	3.68	Strongly Agree	7
Composite Mean	**3.77**	**Strongly Agree**	

Additionally, students demonstrated their ability to apply what they learned through problem-solving strategies (3.80) and connecting content to real-life situations (3.70). They also showed some metacognitive habits, like note-taking (3.65) and explaining their thought processes (3.68), although these areas still have room for growth.

These trends suggested that students were no longer passively receiving information. Instead, they engaged with the content before class, came prepared, and participated in deeper learning during class time.

This shift aligned with student testimonies during the interviews:

> *"Sa panonood ng mga video bago mag-klase, marami na agad akong natututunan. Hindi na lang ako basta naghihintay sa discussion at paliwanag ng aming teacher dahil mayroon na akong mga katanungan sa isip ko bago magsimula ang klase."* – S3

"Sinubukan ko munang sagutan ang mga example sa video. Kahit may mali ako, mas naalala ko siya nung may activity na kami sa klase." – S4

Teachers also noticed shifts in students' approaches to tasks:

"Mas confident na ang mga bat ana mag explain. Some were even willing to share alternative strategies during group work." – T1

"They weren't waiting for answers anymore. Nag cocollaborate na sila tungkol sa videos na napanood nila, ant nirerelate nila ito with what was happening in our current lessons. Dahil dito mas nakikita ko na they were able to think more critically." – T2

Overall, the flipped classroom approach fostered a sense of independence, effort, and higher-level thinking among the students. This setup allowed students to grasp foundational concepts on their own and then enhance their understanding through collaborative problem-solving during class, leading to more impactful and enduring learning experiences.

2.3 Emotional Engagement of Students in the Flipped Mathematics Classroom. According to the findings in Table 5, students showed positive emotional reactions to the flipped classroom model. With a composite mean of 3.80. Interpreted as Strongly Agree, it's clear that emotional engagement was high. Students reported that they feel more confident, less anxious, and found more joy in their math classes.

The top-rated comment was, "I enjoy the way we learn math through flipped classroom activities" (3.95), highlighting how much students appreciated this engaging and enjoyable approach. Next was "I am motivated to participate because the activities are fun" (3.90), indicating that interactive elements like games and group work really boosted their motivation.

Students also mentioned feeling more comfortable and confident in the learning environment. Statements like "I feel more confident answering math questions in class" (3.85) and "I feel less pressure when I prepare at home" (3.80) suggest that the early exposure to content through video lessons significantly eased their stress.

Although slightly lower, the statements "I am not afraid to make mistakes in front of my classmates" (3.68) and "I feel supported by my teacher and classmates" (3.70) still show that the classroom is a supportive and emotionally safe space. Similarly, the statement "I feel proud when I can explain my answers"

(3.75) indicates that students are starting to build their academic confidence and express themselves more freely.

Table 5

Emotional Engagement of Students in the Flipped Mathematics Classroom

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I feel more confident answering math questions in class.	3.85	Strongly Agree	3
2. I enjoy the way we learn math through flipped classroom activities.	3.95	Strongly Agree	1
3. I feel more relaxed during math class.	3.78	Strongly Agree	5
4. I feel less pressure when I prepare at home before coming to class.	3.80	Strongly Agree	4
5. I am motivated to participate because the activities are fun.	3.90	Strongly Agree	2
6. I am not afraid to make mistakes in front of my classmates.	3.68	Strongly Agree	6
7. I feel proud when I can explain my answers.	3.75	Strongly Agree	7
8. I feel supported by my teacher and classmates during math discussions.	3.70	Strongly Agree	8
Composite Mean	**3.80**	**Strongly Agree**	

Student reflections during interviews supported these quantitative findings:

> *"Nagustuhan ko na pinapanood muna namin 'yung video sa bahay. Hindi na ako masyadong kinakabahan sa klase kasi alam ko na kung tungkol saan ang lesson."* – S5

> *"Dati, ayaw ko talagang sumagot sa klase dahil kabado ako. Pero ngayon, mas komportable na ako kahit magkamali ako dahil hindi naman ako pinagtatawanan ng mga kaklase ko."* – S6

Teachers have also noted a change in students' emotional attitudes:

> *"The flipped classroom created a more relaxed learning environment. Students laughed and shared ideas, and they weren't as tense as before."* – T1

"They were relaxed or at ease during group activities. Mas willing na din sila na mag explain ng solutions sa board. They also clearly felt a sense of pride in what they had accomplished." – T2

The findings indicated that the flipped classroom not only enhanced students' academic understanding but also transformed the emotional atmosphere in math classes. This new learning design made students feel more prepared, supported, and comfortable enough to participate without anxiety or fear, the key elements of a positive and motivating learning experience.

3. Student Perceptions on Flipped Classroom Lessons

Students had a favorable view of the flipped classroom model and shared insightful feedback about their experiences. They found the approach to be clear and user-friendly. They especially value the option to pause, rewind, and rewatch the video lessons at their own pace. Many students described the lessons as well-paced. Although a few suggested that shorter videos might help maintain their focus. The model also seemed to boost motivation, particularly when activities encouraged peer collaboration, which in turn increased their engagement and confidence.

3.1 Students' Perception on the Clarity of Flipped Classroom Lessons. The data in Table 6 shows that students generally viewed the flipped classroom lessons as clear, understandable, and easy to follow. The composite mean of 3.77, interpreted as Strongly Agree, reflects a strong positive perception of the clarity and effectiveness of the video lessons used in this flipped learning approach.

The highest-rated indicator was that "The video lessons are easy to understand" with a score of 3.95, closely followed by "The voice and instructions in the videos are clear" at 3.90. These findings really highlight how much students valued both the way the content was organized and the quality of the delivery in the instructional videos.

In third place, we have "I understand better when I can watch the video more than once" scoring 3.85, which emphasizes the advantage of letting learners control their own pace, something that traditional, live lectures just can't offer.

Other indicators such as "The lessons use simple and understandable language" (3.80) and "The examples given in the videos are helpful and clear" (3.75), further reinforce the idea that the materials were easy to grasp and relatable for most students.

Table 6

Students' Perception on the Clarity of Flipped Classroom Lessons

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. The video lessons are easy to understand.	3.95	Strongly Agree	1
2. The voice and instructions in the videos are clear.	3.90	Strongly Agree	2
3. I understand better when I can watch the video more than once.	3.85	Strongly Agree	3
4. The lessons use simple and understandable language.	3.80	Strongly Agree	4
5. The examples given in the videos are helpful and clear.	3.75	Strongly Agree	5
6. I can follow the step-by-step solutions shown in the videos.	3.70	Strongly Agree	6
7. I rarely get confused while watching the flipped lessons.	3.65	Strongly Agree	7
8. The questions and exercises in the videos are explained well.	3.60	Strongly Agree	8
Composite Mean	**3.77**	**Strongly Agree**	

Even though they ranked a bit lower, aspects like step-by-step solutions (3.70), minimal confusion (3.65), and clarity of exercises (3.60) still received Strongly Agree ratings, confirming that the flipped classroom videos were consistently effective in helping students understand the material.

Student feedback further reinforced these results:

> *"Mas madali kong naintindihan ang video kaysa sa module. Gusto ko rin na pwede kong balikan at ireplay ang mga steps kapag may hindi ako nagets adad."* – S7

> *"Minsan sa klase hindi ko agad naiintindihan. Pero sa video, pwede kong i-pause tapos mag isip muna, tapos iplay ulit.."* – S8

Teachers also noted improved clarity in student understanding:

> *"Students came to class without the basic questions. They understood the concept therefore we spent more time on their applications."* – T1

The ability to control their own learning pace through video content really boosted students' confidence in learning independently. These findings backed

up the idea that the flipped classroom approach, which focuses on clear instructions, visual examples, and the flexibility to review material, significantly improved students' grasp of math concepts by making lessons easier to understand and more engaging.

3.2 Students' Perception on the Pacing of Flipped Classroom Lessons. The results in Table 7 revealed that students valued the flexibility and self-paced aspect of flipped classroom lessons. With a composite mean of 3.69. Verbally interpreted as to Strongly Agree, it's clear that students had a very positive reaction to how the pacing of lessons catered to their individual learning needs.

Table 7

Students' Perception on the Pacing of Flipped Classroom Lessons

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I can study the lessons at my own pace.	3.90	Strongly Agree	1
2. The speed of explanation in the videos is just right.	3.75	Strongly Agree	3
3. I do not feel rushed to understand the lesson.	3.85	Strongly Agree	2
4. I can pause or rewind the video when needed.	3.70	Strongly Agree	4
5. I like that I can review the lesson whenever I want.	3.65	Strongly Agree	5
6. The classroom activities give enough time for me to apply the lesson.	3.60	Strongly Agree	6
7. I feel the class discussions after the video are well-paced.	3.55	Strongly Agree	7
8. I finish the in-class activities within the time given.	3.48	Agree	8
Composite Mean	**3.69**	**Strongly Agree**	

The top-rated statement, "I can study the lessons at my own pace" (3.90), highlighted how much students appreciated having control over their learning speed. Hot on its heels was "I do not feel rushed to understand the lesson" (3.85) and "The speed of explanation in the videos is just right" (3.75), showing that students found the pacing both flexible and easy to manage.

They also enjoyed interactive features like the ability to pause, rewind (3.70), and review lessons whenever they wanted (3.65), indicating that the video

format really supported their independent learning and helped them tackle complex ideas at their own pace.

While slightly lower, feedback on classroom pacing, such as "classroom activities give enough time" (3.60) and "discussions are well-paced" (3.55), still fell within the Strongly Agree range. The lowest-rated item, "I finish the in-class activities within the time given" (3.48), landed in the Agree category. This suggesting that while most students kept up with the pace, a few might still need some adjustments or extra support during hands-on activities.

Student feedback supported these results:

> *"Gusto ko na pwede kong ipause ang video kapag may hindi ako naiintindihan. Mas natuto ako kasi hindi ako nagmamadali lalo na pag may hindi agada ko naintindihan."* – S9

> *"Minsan pinapanood ko pa ng dalawang beses ang video bago mag-klase kaya alam ko na agad ang gagawin kapag may problem solving na."*— S10

Teachers also observed the benefits of the flexible pacing:

> *"Mas confident ang mga bata ngayon sa mga gawain dahil napanood na nila ang lesson. Hindi na sila gaanong umaasa sa traditional na pagtuturo o yung explicit teaching."* – T1

> *"Dahil nagkaroon ng pagkakataon ang mga estudyante na ipreview ang lesson ng advance, mas nakafocus na sa application ang oras sa klase, hindi na lang sa paliwanag."* – T2

The flipped classroom approach really helped students grasp mathematical concepts at their own speed, creating a more relaxed and student-focused atmosphere. The combination of flexible video pacing and organized classroom activities led to a deeper understanding, less anxiety, and a more effective use of teaching time.

3.3 Students' Perception on Motivation in the Flipped Classroom Model. According to the findings in Table 8, the flipped classroom model had a positive impact on students' motivation to learn math. With a composite mean of 3.77, which is interpreted as Strongly Agree. It was clear that students felt more enthusiastic, engaged, and interested in math lessons delivered through this flipped approach.

The top-rated statement, "I am excited to learn math through flipped classroom" (3.90), really captured strong emotional and motivational engagement. Right behind it was "I feel motivated to prepare for class by watching

the video lessons" (3.85), showing that students were more proactive and eager to participate in class after going over the material.

Table 8

Students' Perception on Motivation in the Flipped Classroom Model

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I am excited to learn math through flipped classroom.	3.90	Strongly Agree	1
2. I feel motivated to prepare for class by watching the video lessons.	3.85	Strongly Agree	2
3. I enjoy the flipped learning activities during class.	3.80	Strongly Agree	4
4. I feel more interested in math now than before.	3.83	Strongly Agree	3
5. The videos make learning more fun and engaging.	3.75	Strongly Agree	5
6. The use of technology makes me more involved in learning.	3.70	Strongly Agree	6
7. I look forward to participating in flipped classroom activities.	3.68	Strongly Agree	7
8. I feel more eager to complete class tasks after watching the videos.	3.65	Strongly Agree	8
Composite Mean	**3.77**	**Strongly Agree**	

Other notable responses included "I feel more interested in math now than before" (3.83) and "I enjoy the flipped learning activities during class" (3.80), which suggest that the lively nature of flipped lessons has positively influenced students' attitudes toward math.

While slightly lower, comments like "The videos make learning more fun and engaging" (3.75) and "The use of technology makes me more involved" (3.70) pointed out how multimedia tools boosted motivation and focus. Finally, indicators such as "I look forward to participating" (3.68) and "I feel more eager to complete class tasks" (3.65) highlighted how flipped instruction has ramped up students' readiness and enthusiasm for learning activities.

Feedback from students reinforced these observations:

"Dati ay ayaw ko sa Math. Pero ngayon kahit nahihirapan pa din ako mas nagiging masaya kasi may mga activities at hindi lang puro pakikinig sa paliwanag ng aming teacher." – S11

"Yung mga video ay nakakacurious talaga sa lesson. Minsan ay sinusubukan ko na ding sagutan ang problems bago pa ang aming klase.." – S12

Teachers likewise observed improvements in students' energy and drive:

"Mas prepared at mas excited pumasok sa klase ang mga estudyante. May ilan pa nga na nagpapaalala sa kaklase nila na panoorin ang videos bago magklase." – T1

"Mas active na sila, lalo na sa group activities. Ang flipped setup ay nakatulong para makita nila ang Math bilang isang subject na pwede nilang maenjoy." – T2

These findings highlighted how the flipped classroom created a more engaging learning atmosphere, where students became more interested in their lessons, prepared on their own, and actively took part in learning activities. By incorporating videos, encouraging peer collaboration, and including in-class tasks, curiosity was sparked, and students felt a sense of ownership over their learning, making it more meaningful and enjoyable.

3.4 Students' Perception on the Effectiveness of Flipped Learning. Table 9 showcases students' overall views on the flipped classroom model, which received a composite mean score of 3.74, interpreted as Strongly Agree. The data revealed that students considered the flipped approach to be an effective and advantageous method for learning mathematics, particularly regarding understanding, independence, and long-term retention.

The item that received the highest rating was "I understand the lesson better through the flipped classroom" (3.90), showing that students felt this model significantly enhanced their understanding of math concepts. This was closely followed by "The flipped classroom helps me learn more independently" (3.85), highlighting the model's effectiveness in promoting self-directed learning.

Students expressed that they could really use what they learned from the videos in their classroom activities, as shown by the response to the statement "I can apply what I learned in videos to class activities" (3.80). This indicates a strong connection between preparing with videos and being actively engaged in class.

Table 9

Students' Perception on the Effectiveness of Flipped Learning

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I understand the lesson better through the flipped classroom.	3.90	Strongly Agree	1
2. I can apply what I learned in videos to class activities.	3.80	Strongly Agree	3
3. The flipped classroom helps me learn more independently.	3.85	Strongly Agree	2
4. I learn math more effectively compared to traditional lessons.	3.75	Strongly Agree	4
5. I can remember the lesson longer when I watch videos.	3.70	Strongly Agree	5
6. Flipped learning helps me improve my math performance.	3.68	Strongly Agree	6
7. I feel confident using what I learned in real-world situations.	3.65	Strongly Agree	7
8. I would recommend flipped classroom to other students.	3.60	Strongly Agree	8
Composite Mean	**3.74**	**Strongly Agree**	

Moreover, responses like "I learn math more effectively compared to traditional lessons" (3.75) and "I can remember the lesson longer when I watch videos" (3.70) pointed to better retention and a deeper understanding of the material.

Although slightly lower, other responses still showed positive views, such as improvements in performance (3.68), confidence in applying what they learned in real life (3.65), and a willingness to recommend this approach to others (3.60). These findings confirm that the flipped learning model not only boosted academic comprehension but also fostered students' confidence, independence, and ongoing interest in mathematics.

During the interviews, students commented on how flipped learning changed the way they approached math:

> *"Mas madali kong naintindihan ang lesson ngayon pagkatapos kong manood ng video. Pagdating sa klase ay alam ko na ang topic kaya mas nasusundan ko."* – S13

"Hindi ko na kailangang itanong sa aming teacher lahat ng steps sa pagsosolve. Natutunan kong magsolve mag isa pagkatapos kong manood ng video nang paulit ulit." – S14

Teachers also noted a marked improvement in student performance and independence:

"Mas naging confident ang mga estudyante ko ngayon. Nakakapag solve na sila ng mga math problems na hindi na gaanong kailangan ang pag guide ko. Ang mga kaklase nila ay nakkatulong ko na din sap ag guide sa iba na nahihirapan pa sa klase" – T1

"Kahit ang mga estudyanteng nahihirapan, nakikita ko pa din ang kanilang progress. Nakakatulong sa kanila na makasabay sa iba ang panonood ng video lectures bago ang klase." –- T2

These findings confirmed that the flipped classroom model was not just engaging and motivating; it also played a significant role in helping students enhance their understanding, retention, and independence as learners. By shifting content delivery outside the classroom, students gained more autonomy to learn at their own pace, allowing class time to be focused on application work, collaboration, and deeper learning.

4. Challenges in Implementing the Flipped Classroom Model

Despite the noticeable improvements in student learning and engagement with the flipped classroom model, there were some hurdles in its implementation. Teachers pointed out various challenges that arose during both the planning and execution phases. Issues like limited access to the internet and devices at home, the time required to prepare instructional videos, and resistance from students who were unfamiliar with self-paced learning all raised concerns. These highlighted the need for greater awareness of the additional support, resources, and adaptations necessary to ensure the successful integration of this model into classroom practices.

Table 10 lays out the challenges teachers face when trying to implement the flipped classroom model. With a composite mean of 3.68, which translates to Strongly Agree, it's clear that while educators see the benefits of flipped instruction, they also encounter significant hurdles that impact how well it can be executed and sustained.

Table 10

Challenges Encountered by Teachers in Implementing the Flipped Classroom Model

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Many students have limited or no internet access at home.	3.90	Strongly Agree	1
2. It takes a lot of time to create and edit high-quality video lessons.	3.85	Strongly Agree	2
4. Students are initially unfamiliar with self-paced learning.	3.80	Strongly Agree	3
3. Some students do not consistently watch the assigned videos before class.	3.75	Strongly Agree	4
6. Teachers need more training on how to deliver flipped lessons effectively.	3.70	Strongly Agree	5
5. Teachers lack access to advanced equipment for video production.	3.65	Strongly Agree	6
7. Some parents are unaware of the flipped approach and its benefits.	3.60	Strongly Agree	7
8. Monitoring whether students truly understand the videos is challenging.	3.55	Strongly Agree	8
9. Flipped lessons require more planning time than traditional ones.	3.50	Strongly Agree	9
10. It is difficult to ensure all students are engaged in group activities.	3.45	Agree	10
Composite Mean	**3.68**	**Strongly Agree**	

The biggest concern was that "Many students have limited or no internet access at home" (3.90), shining a light on ongoing issues of inequity, especially in areas where internet access is unreliable or technology is lacking. Close behind was the statement "It takes a lot of time to create and edit high-quality video lessons" (3.85), reflecting the considerable effort required to produce effective flipped content.

Several challenges pointed to issues with student readiness. Teachers observed that "Students are initially unfamiliar with self-paced learning" (3.80) and that "Some students do not consistently watch the assigned videos before class" (3.75), indicating that students require significant guidance and regular monitoring.

There were also clear needs for professional development and resources. Teachers voiced the necessity for training (3.70) and better equipment (3.65) to ensure they can deliver high-quality flipped instruction. Additionally, the statement "Some parents are unaware of the flipped approach and its benefits" (3.60) highlighted the crucial role of family involvement in enhancing students' learning experiences.

Lastly, while the lower-ranked indicators were slightly less pronounced, they still garnered Strongly Agree to Agree responses. These included the challenges of monitoring student understanding of videos (3.55), the increased demands for planning (3.50), and ensuring full participation from the group (3.45). These findings underscore the importance of balancing preparation, assessment, and engagement in a flipped classroom setting.

Despite these challenges, many teachers saw these challenges as just part of the growing challenge that come with adapting to a new teaching method. The data indicated that with the right support from the school, teachers and parents, access to resources, and a focus on stakeholder needs, the flipped classroom model could be implemented more effectively and maintained over time.

5. Proposed Enhancement Activities

To tackle the issues faced and to foster even greater learning, engagement, and motivation in the flipped classrooms, enhancement activities were developed. These initiatives aim to ensure the sustainability and continuous improvement of the flipped approach, making it more inclusive, interactive, and responsive to the needs of both students and teachers.

Suggested Activities	Objectives	Description	Expected Outcome
1. Gamified Quizzes (Kahoot, Quizizz)	To increase student motivation and review key concepts	Incorporate interactive quiz platforms that reward participation and performance with points or badges	Higher student engagement and improved retention of math concepts
2. Peer-led Mini-Lessons	To encourage student collaboration and deeper understanding	Assign selected students to explain key topics during class time, supported by the teacher	Improved confidence, communication skills, and concept mastery

3. Integration of GeoGebra or Desmos	To visualize abstract math concepts	Use dynamic mathematics tools to let students explore graphs, functions, and geometric constructions	Enhanced conceptual understanding through visual and interactive learning
4. Student-created Explainer Videos	To reinforce understanding and promote ownership of learning	Ask students to create short videos explaining a topic or solving a problem using digital tools	Strengthened understanding and creativity; development of 21st-century communication skills
5. Flipped Classroom Orientation Sessions	To ensure proper understanding of the flipped model	Conduct quarterly orientation for students and parents to explain how flipped learning works and how they can support at home	Increased buy-in and support from families; better preparation for at-home learning
6. Weekly Video Review Reflections	To encourage metacognition and self-monitoring	Require students to write or record brief reflections after watching video lessons about what they learned or found difficult	Improved critical thinking and self-awareness in learning processes
7. Technology Access Support Program	To reduce the digital divide	Provide printed versions of video transcripts or offline video files for students with limited internet access	More inclusive access to flipped materials, reducing absenteeism or learning gaps
8. Teacher Collaborative Planning Sessions	To improve video content and lesson alignment	Conduct bi-weekly or monthly collaborative meetings among teachers to plan and improve flipped lessons	Higher-quality video materials and synchronized instruction
9. Feedback and Suggestion Box	To gather real-time student feedback	Use physical or digital boxes/forms where students can suggest improvements or express challenges they encounter	Continuous improvement of flipped lesson delivery based on learner feedback

10. Recognition of Top Performers and Contributors	To build motivation and reward participation	Acknowledge students who actively contribute in flipped activities (e.g., video reflections, group work, peer lessons) during flag ceremonies or online	Boosted motivation and classroom leadership

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, it can be concluded that the flipped classroom model significantly boosted students' conceptual understanding and made in-class time more meaningful, while also increasing their behavioral and cognitive engagement as well as their overall motivation. Although a few minor challenges were encountered, the approach was generally well-received and proved effective from a teaching standpoint. Furthermore, the study highlights that successful implementation of the flipped model requires strong teacher adaptation and consistent parental support.

The researcher recommends promoting flipped classroom strategies in other subject areas, providing professional development and adequate planning time for teachers to create and refine instructional content, and investing in school-wide infrastructure to support students' at-home access to learning materials. It is also advised to establish a platform where teachers can share flipped resources and collaborate, as well as to conduct further research exploring the long-term effects and scalability of the flipped classroom model.

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ASSESSMENT OF THE IMPLEMENTATION OF WASH IN SCHOOLS (WINs) PROGRAM IN THE SCHOOLS DIVISION OF BATANGAS CITY: BASIS FOR A PROPOSED CAPACITY BUILDING PROGRAM

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Abstract: This study aimed to assess the implementation of the WASH in Schools (WinS) Program in the Schools Division of Batangas City to determine compliance with key indicators and identify challenges affecting program delivery. Using a quantitative-descriptive design, data were gathered from 86 WinS coordinators through a structured questionnaire and analyzed using descriptive statistics. Findings revealed satisfactory implementation in water access, sanitation, hygiene, and deworming, while health education showed weaker integration into curricular and co-curricular activities. Major challenges included insufficient budget, inadequate facilities, limited staff training, and weak stakeholder engagement. It recommends a complete training program that focuses on technical skills, leadership training, better ways to monitor progress, and getting the community more involved. The proposed output aims to help make the program more effective and create healthier spaces for students to learn.

Keywords: WASH in Schools (WinS), water access, sanitation, hygiene, deworming, health education, capacity building

INTRODUCTION

Water, Sanitation, and Hygiene in Schools (WASH or WinS) continues to be a global priority because inadequate sanitation, unsafe water, and poor hygiene practices continue to undermine children's health, safety, and learning opportunities worldwide. International assessments led by UNICEF consistently show that many communities especially in low- and middle-income countries still struggle with limited access to safe water and proper sanitation facilities,

resulting in persistent risks of preventable diseases, child malnutrition, and gender-based vulnerabilities (Andersson et al., 2017). The Philippines reflects these global concerns, as disparities in sanitation access remain pronounced in rural and disadvantaged areas, where many children attend schools with limited privacy, unreliable water supply, and inadequate hygiene infrastructure (Molina et al., 2021). These conditions negatively influence students' comfort, attendance, and overall well-being, emphasizing the continued relevance of DepEd's WinS policy (DO 10, s. 2016) in supporting national efforts toward achieving Sustainable Development Goal 4 (Quality Education) and Sustainable Development Goal 6 (Clean Water and Sanitation).

While the government has detailed national guidelines in place, the implementation of WinS across schools in the Philippines is still inconsistent. Many schools continue to deal with issues involving poorly maintained toilets, lack of hygiene supplies, and unreliable access to clean water (Buxton et al., 2019; Dalisay et al., 2024). The differences in infrastructure quality and the ability of school staff to handle WinS requirements show that there are ongoing gaps in how the program is being carried out. Initial observations also point to problems in regularly checking and maintaining hygiene practices, which means several schools are having difficulty meeting the standards set by the WinS Three-Star Approach. These issues strongly reflect the need for a thorough division-wide assessment to find out the current level of schools' compliance and identify the specific local factors that affecting their implementation.

Well-implemented WinS programs have been shown to support improved student health, reduce the frequency of communicable diseases, and contribute to better learning outcomes (Sangalang et al., 2022). However, schools in Batangas City show significant differences that prevent them from fully achieving these benefits. While some schools have good hygiene practices and working WASH facilities, others keep facing challenges like limited budgets, lack of training for staff, irregular monitoring, and minimal involvement from the community. The fact that there is no comprehensive evaluation at the division level makes it harder for program managers to create specific interventions that address the actual needs and problems.

In view of these challenges, conducting a thorough assessment of WinS implementation in the Schools Division of Batangas City was deemed timely and relevant. Thus, this study examined existing practices, identify strengths and areas for improvement, and document operational barriers that affect consistent

program delivery. The results were used as basis for a capacity-building program designed for school heads, teachers, and WinS focal persons. By identifying the competencies, support systems, and resources needed at the school level, the proposed program aims to improve WinS implementation, strengthen compliance with national standards, and help create a healthier and more supportive learning environment for all students in Batangas City.

Literature Review

The researcher referred to various published studies to better understand and interpret the results within the context of the study's operational framework.

Wash in Schools (WINs) Program Implementation in DepEd Schools

The WASH in Schools (WinS) Program of the Department of Education has become an important strategy for improving school health conditions and supporting national and global commitments, particularly Sustainable Development Goal (SDG) 6 on clean water and sanitation. Based on the Three Star Approach, WinS encourages gradual improvement in water access, sanitation, hygiene practices, and health education, allowing schools to work toward higher compliance standards over time (Culang et al., 2021). This framework is supported by annual monitoring done by DepEd together with organizations like UNICEF, which gives schools structured feedback and technical guidance (Kusumaningtiar et al., 2024; Deroo et al., 2015). Studies show that schools reaching higher levels of compliance under this framework tend to report better student health and attendance outcomes, showing reductions in common illnesses through improved hygiene education and use of facilities (Dakhode & Gaidhane, 2021). These findings show how combining infrastructure improvements with behavior-focused interventions helps create healthier and more supportive learning environments.

Despite these benefits, research consistently shows that WinS implementation across the Philippines remains uneven due to ongoing challenges in school capacity and resource availability. Many schools, especially those in rural and remote areas, continue to struggle with limited water supply, insufficient sanitation facilities, and weak systems for maintenance and monitoring (Kusumaningtiar et al., 2024; Deroo et al., 2015). These problems are often exacerbated by funding constraints, lack of training among school personnel, and logistical barriers that prevent consistent program oversight

(Mensah et al., 2022; Baltag, 2023). Research also points out the need for stronger local systems and community involvement, as sustainability becomes difficult when infrastructure deteriorates without continued operational support (Culang et al., 2021; Seroney et al., 2023). Recent studies recommend using technology-based monitoring, strengthening partnerships, and improving capacity-building initiatives to address longstanding disparities and ensure more resilient WASH systems in schools (Pereira et al., 2024; Wagner & Samuelsson, 2019). Overall, the literature confirms that while WinS establishes a solid policy foundation, addressing systemic gaps and regional inequities remains important to achieving safe and health-promoting environments for all learners.

Barriers and Challenges in the Implementation of WINs Program

Despite policy frameworks such as DepEd Order No. 10, s.2016 and the Three-Star Approach, schools in the Philippines continue to face resource and infrastructure limitations that hinder full implementation of the WinS program. Studies reveal that inadequate water supply, insufficient hygiene materials, and poor maintenance of sanitation facilities remain common barriers, particularly in rural and geographically isolated areas (Dalisay et al., 2024). Budget constraints exacerbate these issues, as allocations for WASH improvements often compete with other pressing educational needs. While national initiatives have improved access to basic facilities, gaps in infrastructure quality and sustainability persist, requiring stronger partnerships with local governments and private stakeholders to address systemic deficiencies (UNICEF, 2023; WinS Network, 2023). These challenges underscore the need for long-term investment strategies and localized solutions to ensure reliable water and sanitation services in schools.

Human resource and monitoring-related constraints further complicate implementation. School WinS coordinators often manage multiple responsibilities, limiting their capacity to oversee compliance and sustain program quality (DepEd, 2024; Udto, 2022). Technical gaps in understanding WinS standards and the absence of continuous professional development opportunities contribute to inconsistent practices across schools (Dalisay et al., 2024). Monitoring and documentation also pose significant challenges. While DepEd's online system and the Three-Star Approach have improved reporting, many schools struggle with data accuracy and timely submission, leading to uneven compliance with national indicators (WinS Network, 2023). Stakeholder engagement remains critical yet underdeveloped. Parental involvement and LGU

support vary widely, and cultural norms sometimes hinder hygiene practices such as menstrual health management (UNICEF, 2023). These findings highlight that beyond infrastructure, successful WinS implementation requires capacity building, robust monitoring systems, and sustained community participation to achieve health and education outcomes.

Proposed Capacity Building for Effective WinS Implementation

Capacity building is essential for the effective implementation of school health programs like WinS, as it ensures that the system is ready and provides stakeholders with the necessary skills and organizational structures. The principles of capacity building focus not only on technical skills but also on leadership, governance, and collaborative methods that allow schools to integrate health and hygiene into their improvement plans (DepEd, 2024). In the Philippine context, DepEd has established capacity development through the Three-Star Approach and School-Based Management, supported by guidelines that promote organizational strengthening and continuous learning (DepEd, 2016; UNICEF, 2023). These frameworks support competency-based training and participatory planning, recognizing that sustainable health outcomes depend on empowering school personnel and building multi-sectoral partnerships.

Training models for school personnel have changed from traditional workshops to blended approaches that include Massive Open Online Courses (MOOCs), peer-learning strategies, and digital monitoring tools (WinS Network, 2023; Udto, 2022). Evidence from regional best practices shows that coaching and peer-support systems increase teacher confidence and program ownership, while structured evaluation methods ensure accountability and continuous improvement (Calloa & Ubayubay, 2023; Robbins, 2015). Successful divisions have shown that needs-driven training, combined with follow-up mentoring and integration into school improvement planning, leads to higher compliance with WinS standards and improved learner health outcomes (DepEd, 2024; Dalisay et al., 2024). These findings highlight that capacity building is not a one-time intervention but an ongoing process that requires sustained investment, flexible strategies, and strong stakeholder engagement to make hygiene and health practices a permanent part of school operations.

Research Questions

This study assessed the level of implementation of the WASH in Schools (WinS) Program in the Schools Division of Batangas City based on key indicators.

Specifically, it sought answers for the following questions:

1. What is the status of implementation of the WASH in Schools (WinS) Program in terms of:
   - 1.1 Water access
   - 1.2 Sanitation
   - 1.3 Hygiene
   - 1.4 Deworming
   - 1.5 Health education
2. What are the challenges faced by coordinators in implementing the WASH in Schools program?
3. What capacity-building program may be proposed to enhance the implementation of the WASH in Schools program?

METHODOLOGY

Research design

The study employed a quantitative-descriptive design to evaluate the implementation of the WinS Program. It aimed to gather measurable data on program status and challenges to support the development of a capacity-building program. Additionally, stratified random and purposive sampling were used to select 86 WinS coordinators from 109 public schools (66 from elementary and 20 from secondary). This ensured balanced representation and reliable insights from those directly involved in program implementation.

Research instruments

The study utilized a structured questionnaire developed by the researcher to gather quantitative data on the implementation of the WinS Program. The instrument was divided into three sections: the first collected information about the respondents, including their position and school level; the second evaluated the status of WinS implementation across five key areas—water access, sanitation, hygiene, deworming, and health education—using a 5-point Likert scale; and the third identified challenges faced in program implementation through multiple-choice and rating-scale items. Content validity was ensured through expert review by specialists in school health and education, who checked

that the items were aligned with DepEd's Three-Star Approach, while a pilot test was done to improve the clarity, usability, and overall reliability of the instrument. To make data collection more efficient, the questionnaire was given online through Google Forms.

Data Analysis

The data collection procedure involved several systematic steps to ensure proper coordination, accessibility, and reliability. First, the researcher secured approval from the Schools Division Superintendent and coordinated with school heads and WinS coordinators to facilitate participation. The validated questionnaire, accompanied by an informed consent form, was then distributed through official school communication platforms to reach respondents efficiently. Respondents were given a two-week period to complete the questionnaire, during which follow-up reminders were sent to enhance response rates. Completed responses were automatically recorded in Google Forms and subsequently exported to Excel and SPSS for statistical analysis. This procedure adhered to established best practices in digital survey research, ensuring accessibility for participants, efficient data management, and the confidentiality of respondents' information.

RESULTS AND DISCUSSION

The data collected from various respondents in elementary and secondary schools, both rural and urban, provides a detailed insight into the implementation of the WASH in Schools (WinS) program. The responses were categorized into several key areas: Water Access, Sanitation, Hygiene, Deworming, Health Education, and Challenges.

1. Status of Implementation of The WASH In Schools (Wins) Program in SDO Batangas City

1.1. Water Access

Table 1 presents the status of water access implementation under the WinS Program in the Schools Division of Batangas City, showing generally satisfactory compliance across key practices. Most schools consistently provide safe and free drinking water, coordinate with local government units for water testing, and ensure water availability for handwashing and toilet cleaning, while additional measures such as allowing learners to bring their own drinking water

further support safety. Formal requirements like water certificates from refilling stations were less consistently applied, and some schools still face issues related to water source reliability and infrastructure.

Table 1

Status of Implementation in WINs Program Relative to Water Access

Indicators	Mean	SD	VI
1. The school always provides safe and free drinking water.	3.61	0.793	SA
2. The school coordinates with the LGU or water district to test the quality of water	3.54	0.831	SA
3. Other mechanisms are used to ensure that drinking water in school is safe (ex. Teachers ask the learners to bring their own drinking water to school)	3.74	0.67	SA
4. The school requires a water certificate if drinking water is from a refilling station]	3.45	0.909	A
5. Water for daily handwashing and cleaning of toilets are available in school regardless of source]	3.68	0.758	SA
Composite Mean	**3.604**	**0.7922**	**SA**

Legend: (SA-Strongly Agree, A-Agree, D-Disagree, SD-Strongly Disagree)

These practices collectively yielded a composite mean of 3.604, indicating overall satisfactory implementation. As cited by Culang et al. (2021), access to safe water is a central component of the Three-Star Approach, which promotes progressive improvements in school water, sanitation, and hygiene practices. These findings highlight that while basic water access is largely achieved, targeted efforts to formalize safety measures, strengthen monitoring, and address infrastructure and reliability challenges are essential to sustain quality and enhance the health and learning environment for students (Dakhode & Gaidhane, 2021; DepEd, 2016; UNICEF, 2023).

1.2. Sanitation

Table 2 presents the status of sanitation implementation under the WinS Program in the Schools Division of Batangas City, showing generally satisfactory

compliance across key indicators, with strong adherence to standards such as gender-segregated toilets, daily maintenance, and waste management practices. Schools reported that daily maintenance and cleaning of toilets and handwashing facilities are consistently carried out, with a mean of 3.76, while the presence of handwashing facilities with soap scored 3.71, and segregated trash bins and waste segregation practices also received high ratings of 3.74 and 3.71, respectively.

Table 2

Status of Implementation in WINs Program Relative to Sanitation

Indicators	Mean	SD	VI
1. The overall pupil to toilet seat ratio is 101 students or higher and there are at least two functional and clean toilets that are gender segregated	3.34	0.78	A
2. Toilets are secure, private, with door and lock, have lighting, adequate ventilation and wrapping materials for used pads.	3.58	0.70	SA
3. Daily maintenance and cleaning of toilets and handwashing facilities are carried out by the school	3.76	0.58	SA
4. There is a handwashing facility with soap within or near the toilets.	3.71	0.64	SA
5. There is a facility for washing in female toilets for Menstrual Hygiene Management.	3.48	0.72	A
6. There is a toilet accessible to persons with limited mobility.	3.29	0.86	A
7. Funding for regular maintenance and repair of toilets, handwashing and other water facilities comes from the regular school budget (i.e. MOOE) and/or other DepEd funds.	3.58	0.73	SA
8. Segregated trash bins with cover are available in all classrooms.	3.74	0.56	SA
9. Waste segregation is practiced.	3.71	0.63	SA
10. Garbage is collected at least once a week, OR school has compost facility for biodegradable waste and safe disposal of non-biodegradable waste such as properly fenced refuse pits (burying)	3.71	0.61	SA
11. The school have a materials recovery facility (MRF) for recyclable waste.	3.69	0.65	SA
12. Functional Septic tank is available for all toilets.	3.71	0.63	SA

13. Functional drainage from kitchen and wash areas to ensure that there is no stagnant water in the school.	3.62	0.67	SA
14. All food handlers should have a health certificate.	3.42	0.77	A
Composite Mean	**3.595**	**0.6795**	**SA**

Legend: (SA-Strongly Agree, A-Agree, D-Disagree, SD-Strongly Disagree)

Toilets were found to be mostly secure, private, and gender-segregated (mean = 3.58), and facilities for menstrual hygiene management were present in some schools (mean = 3.48). However, challenges remain, including a high pupil-to-toilet seat ratio (mean = 3.34), limited accessibility for students with disabilities (mean = 3.29), and incomplete health certification of food handlers (mean = 3.42). Funding for maintenance, sourced from regular school budgets and DepEd allocations, scored 3.58, supporting the sustainability of facilities. The composite mean of 3.595 indicates overall satisfactory sanitation implementation across the division.

As mentioned by Deroo et al. (2015), many schools in the Philippines face challenges in maintaining adequate sanitation facilities, including limitations in infrastructure, accessibility, and routine maintenance, which align with the observed issues in pupil-to-toilet ratios, accessibility for students with disabilities, and menstrual hygiene facilities. These findings suggest that while most schools comply with basic sanitation standards, targeted interventions are needed to strengthen inclusive infrastructure, enhance hygiene facilities, and ensure a safe and supportive learning environment for all students (DepEd, 2016; UNICEF, 2023).

1.3. Hygiene

Table 3 presents the status of hygiene-related implementation in the WINs Program. The findings show that hygiene practices are generally well-integrated into daily routines, with daily supervised group handwashing with soap led by teachers and students receiving a mean of 3.58, and supervised toothbrushing activities scoring 3.52. Regular availability of handwashing facilities and soap is maintained, as indicated by a mean of 3.70 for soap supply and 3.70 for functional handwashing stations. Meanwhile, the supply of fluoride toothpaste is slightly lower at 3.27, suggesting occasional shortages. Repair and maintenance efforts reflected in the School Improvement Plan and Annual Improvement Plan score 3.63, while accessibility of sanitary pads is notably high at 3.76, reflecting

attention to menstrual hygiene. The composite mean of 3.594 indicates that overall hygiene implementation is satisfactory.

Table 3

Status of Implementation in WINs Program Relative to Hygiene

Indicators	Mean	SD	VI
1. Daily SUPERVISED group handwashing with soap for all children is led by a mix of teachers and students.	3.58	0.63	SA
2. There is a regular supply of soap for handwashing.	3.70	0.59	SA
3. There is at least one functional group handwashing facility with soap.	3.70	0.67	SA
4. Daily SUPERVISED activity of toothbrushing with fluoride toothpaste for all children is led by a mix of teachers and students.	3.52	0.68	SA
5. There is a regular supply of fluoride toothpaste for the tooth brushing activity.	3.27	0.77	A
6. Repair and maintenance requirements are reflected in the School Improvement Plan (SIP) and Annual Improvement Plan (AIP).	3.63	0.68	SA
7. Sanitary pads are accessible in the school.	3.76	0.57	SA
Composite Mean	**3.594**	**0.654**	**SA**

Legend: (SA-Strongly Agree, A-Agree, D-Disagree, SD-Strongly Disagree)

These results suggest that schools effectively incorporate hygiene routines, although the consistent provision of materials like toothpaste remains a challenge. As mentioned by Kusumaningtiar et al. (2024), WASH in Schools (WinS) Program encourages behavior-focused interventions alongside infrastructure improvements to create healthier learning environments, yet implementation remains uneven due to resource limitations and logistical barriers. The implications of these findings highlight the importance of ensuring reliable supply chains for hygiene materials and maintaining capacity-building initiatives to sustain regular health-promoting practices among students.

1.4. Deworming

Table 4 shows the status of deworming implementation in the WINs Program. The findings indicate strong compliance with deworming protocols, with semi-annual deworming conducted in the presence of health personnel and with

parental consent scoring a mean of 3.76. Coverage is also substantial, as at least 50% of school students were dewormed, reflected by a mean of 3.66. Furthermore, schools demonstrate timely reporting of deworming activities, with submission of semi-annual reports achieving a mean of 3.78. The composite mean of 3.733 indicates that deworming implementation is consistently satisfactory.

Table 4

Status of Implementation in WINs Program Relative to Deworming

Indicators	Mean	SD	VI
1. Deworming is done semi-annually, in the presence of health personnel. (ex. School nurses/Barangay Health Workers) and with parental consent.(ex. School nurses/Barangay Health Workers).	3.76	0.57	SA
2. At least 50% of school students were dewormed.	3.66	0.68	SA
3. The school submits deworming reports semi-annually.	3.78	0.57	SA
Composite Mean	**3.733**	**0.606**	**SA**

Legend: (SA-Strongly Agree, A-Agree, D-Disagree, SD-Strongly Disagree)

The findings suggest that schools effectively follow recommended health protocols, ensuring both compliance with health standards and student participation. Literature on the WASH in Schools (WinS) Program highlights that integrating preventive health interventions, such as deworming, alongside hygiene and sanitation initiatives contributes to improved student health outcomes and reduced absenteeism (Culang et al., 2021; Dakhode & Gaidhane, 2021; Kusumaningtiar et al., 2024). The implications of these findings underscore the importance of sustained collaboration with health personnel and parental involvement to maintain high compliance and support the overall health and well-being of learners.

1.5. Health Education

Table 5 reveals the status of implementation of the WINs Program relative to health education. The results show that informational and organizational supports are in place, with IEC materials displayed in strategic school areas yielding a mean of 3.55, and organized WinS-related teams scoring an identical mean of 3.55. However, integration into teaching and learning systems shows weaker implementation, as WinS inclusion in INSET activities registers a mean

of 3.34. The availability of instructional materials aligned with the K to 12 curriculum scores 3.40, and its incorporation in extracurricular programs records 3.36. The composite mean of 3.440 indicates that while foundational structures exist, the broader integration of WinS into curricular and co-curricular activities remains inconsistent, showing potential for growth.

Table 5

Status of Implementation in WINs Program Relative to Health Education

Indicators	Mean	SD	VI
1. IEC materials are present in classrooms and strategic places (eg. canteen, play areas, toilets, handwashing facilities, etc.)	3.55	0.65	SA
2. There are organized teams and accountable units to promote WinS (e.g. TWGs, student clubs).	3.55	0.61	SA
3. WinS is part of INSET.	3.34	0.72	A
4. Available WinS learning / instructional materials in support of teaching WinS in the K to 12 curriculum.	3.40	0.74	A
5. WinS is part of the extra-curricular program of students.	3.36	0.75	A
Composite Mean	**3.440**	**0.6914**	**A**

Legend: (SA-Strongly Agree, A-Agree, D-Disagree, SD-Strongly Disagree)

According to Culang et al. (2021), WinS provides a strong policy foundation and encourages gradual improvement in hygiene and health education practices. However, as cited by Kusumaningtiar et al. (2024), schools often struggle with uneven implementation due to limitations in resources and technical capacity. This is further echoed by Dalisay et al. (2024), who emphasized that gaps in training and instructional materials hinder consistent health education delivery. In light of these insights, the findings imply the need for strengthened capacity building, enhanced professional development, and improved access to instructional resources to ensure that health education becomes fully embedded in both classroom instruction and student activities, ultimately contributing to more holistic and health-promoting school environments.

2. Challenges in the Implementation of WINs Program in SDO Batangas City

Table 6 presents the challenges encountered in implementing the WinS Program. The findings indicate that the most significant challenges are insufficient budget for WinS implementation and limited staff training on WinS-related activities, both receiving the highest mean score of 2.50, which

respondents agreed as major hindrances. Additionally, respondents agreed that facilities related to water, sanitation, and hygiene are inadequate (M = 2.26), highlighting gaps in infrastructure that may affect program effectiveness. In contrast, respondents disagreed that toilets and handwashing stations are not regularly maintained (M = 1.87) and that WASH-related health education is inconsistently integrated into the curriculum (M = 1.99), suggesting that routine maintenance and educational practices are generally observed. These findings emphasize that while some operational aspects of the WinS Program are well-maintained, addressing resource constraints and capacity-building needs is critical to ensure consistent and effective implementation across schools.

Table 6

Challenges Encountered in the Implementation of WINs Program

Indicators	Mean	SD	VI
1.The school lacks sufficient budget for WinS implementation	2.50	0.92	A
2. Facilities related to water, sanitation, and hygiene are inadequate	2.26	0.89	A
3. Staff members have limited training on WinS-related activities.	2.50	0.85	A
4. Student participation in WASH-related initiatives is low	2.12	0.83	A
5. There is a lack of support from parents, community members, or other stakeholders.	2.08	0.83	A
6. Monitoring and evaluating the implementation of the WinS program is difficult.	2.17	0.76	A
[7. There is limited access to clean and safe drinking water.	2.07	0.89	A
8. Toilets and handwashing stations are not regularly maintained	1.87	0.75	D
9. There is a shortage of hygiene supplies (e.g., soap, cleaning materials).	2.08	0.825	A
10. Health education related to WASH is not consistently integrated into the curriculum	1.99	0.74	D
11. Coordination with local health authorities is weak or inconsistent.	2.08	0.79	A
12. Data collection and reporting for WinS indicators is time-consuming or unclear.	2.03	0.78	A
Composite Mean	**2.146**	**0.821**	**A**

These findings are also consistent with literature emphasizing that resource and infrastructure limitations remain persistent barriers to full WinS implementation, particularly in rural and geographically isolated schools (Dalisay et al., 2024). As cited by Kusumaningtiar et al. (2024), insufficient staff training and weak technical capacity contribute to uneven program compliance, while monitoring and evaluation challenges hinder sustainability. Moreover, as mentioned by UNICEF (2023) and the WinS Network (2023), limited parental and community engagement and inconsistent coordination with local health authorities further reduce program effectiveness. Overall, these results imply that addressing these challenges requires targeted investments, strengthened capacity-building initiatives, improved training, and active stakeholder involvement to ensure consistent implementation of WASH practices and promote healthier learning environments for students.

3. Proposed Capacity-Building Program

The study highlights that while schools have established fundamental WASH practices, gaps remain in budget allocation, staff training, facility adequacy, monitoring, and stakeholder engagement, which limit the full and sustainable implementation of the WinS Program. To address these challenges, a comprehensive capacity-building program is proposed to strengthen school personnel competencies, provide additional instructional and operational resources, improve monitoring and reporting mechanisms, and foster active participation from students, parents, and the community. Thus, the program aims to ensure that health and hygiene practices are consistently integrated into daily school routines and educational activities, thereby creating a more sustainable, health-promoting, and supportive learning environment for all learners.

CONCLUSION AND RECOMMENDATIONS

The primary objective of this study was to assess the level of implementation of the WASH in Schools (WinS) Program in the Schools Division of Batangas City. Specifically, it sought to evaluate compliance with key indicators involving water access, sanitation, hygiene, deworming, and health education. It further identified challenges encountered by school coordinators with the end-goal of proposing a capacity-building program for enhancement of program delivery, and long-term sustainability.

The findings indicate that overall implementation of the WinS Program in Batangas City schools is satisfactory across most indicators. In particular, water access and sanitation practices are generally well observed, reflecting strong adherence to basic standards. Moreover, hygiene routines, including supervised handwashing and toothbrushing, are integrated into daily school activities, although occasional shortages of supplies such as fluoride toothpaste were reported. Deworming protocols are consistently followed, yet health education shows weaker integration into both curricular and co-curricular programs. Despite these strengths, the study identified several challenges such as insufficient budget, inadequate facilities, limited staff training, and weak stakeholder engagement which collectively hinder full compliance and the long-term sustainability of the program.

These results suggest that while schools have achieved basic compliance with WinS standards, systemic gaps in resources and technical capacity continue to present significant barriers. Consequently, the findings reinforce the theoretical premise that effective WASH implementation depends not only on physical infrastructure but also on ongoing capacity development and collaborative stakeholder involvement. In this context, the study supports the Three-Star Approach as a progressive framework for school WASH improvement. However, it also underscores the need for localized strategies that address inequity in resource allocation and technical competencies. Furthermore, the integration of health education into the curriculum emerges as critical for promoting sustained behavioral change among learners, aligning with behavior-focused models in school health promotion.

Based on these findings, the study points out that training programs should include more than just technical skills. They should also cover leadership training, planning that involves all school or community stakeholders. It is also important to improve how schools monitor progress and make sure hygiene supplies are always available. Accordingly, the proposed capacity-building program should employ blended learning approaches, peer-support networks, and structured mentoring to enhance program ownership and accountability. Implementing these measures will not only improve compliance with WinS standards but also contribute to healthier school environments and better learning outcomes for students.

Finally, future research should examine the impact of capacity-building interventions on long-term program sustainability and student health outcomes.

It is important to note that this study was limited to public schools within Batangas City, which may constrain the generalizability of findings to other contexts. Additionally, reliance on self-reported data introduces the potential for bias. Therefore, follow-up studies that incorporate observational audits and include private schools would provide a more comprehensive assessment of WinS implementation. Addressing these limitations through mixed-method approaches and broader sampling strategies will strengthen the evidence base for policy and practice.

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CHARTING THE FUTURE OF CAMPUS JOURNALISM: AN EVALUATION AND IMPROVEMENT PLAN FOR THE CAMPUS JOURNALISM CONTINUITY PROGRAM (CJCP)

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Abstract: This study assessed the implementation of the Campus Journalism Continuity Program (CJCP) in the Schools Division of Batangas City, aiming to evaluate its effectiveness in strengthening campus journalism and supporting both school paper advisers (SPAs) and campus journalists (CJs). Using a descriptive research design, data were gathered from 187 respondents through validated questionnaires that included Likert-scale items and open-ended questions. Findings revealed key challenges such as time constraints, limited resources and digital tools, scheduling conflicts, logistical issues, and inconsistent administrative support, which hindered full participation and optimal program delivery. Despite these constraints, several enabling factors emerged, including strong adviser commitment, active student engagement, structured trainings, cliniquing sessions, and supportive policies that promoted continuity and skill development. The study concludes that with enhanced resource allocation, strengthened coordination, and sustained capacity-building initiatives, the CJCP can further elevate journalistic competencies and foster a culture of excellence within the division. Recommendations include improving scheduling and communication, expanding digital journalism training, enhancing institutional support and recognition, and reinforcing mentoring systems to ensure a more sustainable and future-ready program implementation.

Keywords: Campus Journalism Continuity Program, Program Implementation, Capacity Building, Training and Cliniquing, Adviser and Student Engagement, Stakeholder Support

INTRODUCTION

Campus journalism in the Philippines serves as a critical component of basic education, cultivating learners' critical thinking, civic awareness, and communication competencies. It functions not merely as an extracurricular activity but as an institutional mechanism that promotes democratic participation and empowers students to engage meaningfully in societal discourse (Castro & Miranda, 2022). This orientation is anchored in Republic Act No. 7079, or the Campus Journalism Act of 1991, which underscores the development of journalistic skills and the protection of press freedom within schools as contributions to nation-building (Congress of the Philippines, 1991).

In line with this mandate, the Department of Education (DepEd) has established policies to reinforce campus journalism, most notably DepEd Order No. 46, s. 2012, which institutionalized the Special Program in Journalism (SPJ). The SPJ equips students with advanced competencies across print, broadcast, and emerging digital platforms. Empirical evidence affirms the positive impact of such programs; David (2020) reported that journalism-oriented curricula enhance learners' writing proficiency, critical analysis, and media literacy—competencies essential in navigating complex information environments. Sustaining these benefits, however, requires continuous evaluation to ensure that program delivery remains aligned with evolving educational and technological demands.

Recognizing the need to sustain excellence in campus journalism, the Schools Division Office (SDO) of Batangas City developed the Campus Journalism Continuity Program (CJCP). This initiative responds to the growing demand for systematic capacity-building among school paper advisers and student journalists. The CJCP encompasses adviser training workshops, student journalist development activities, school paper quality assurance mechanisms, and the institutionalization of SPJ curricula in selected schools. It also strengthens collaboration through partnerships with the Batangas City Association of English and School Paper Advisers (BCAESSPA), which supports implementation through mentoring and peer-led training sessions.

Significant improvements have been documented since the program's inception. Batangas City placed second in the Regional Schools Press Conference (RSPC) for two consecutive years (2024 and 2025) and recorded notable gains in individual and group placements at the National Schools Press Conference (NSPC). These achievements affirm the CJCP's effectiveness in enhancing

journalistic competencies, while simultaneously underscoring the need for systematic evaluation to identify gaps, sustain best practices, and ensure program adaptability.

Contemporary challenges further necessitate a reassessment of campus journalism programs. The rise of digital platforms, the spread of misinformation, and the increasing importance of fact-checking and media literacy require updated and responsive curricula. Reyes and Santos (2021) emphasized the integration of digital journalism to prepare students for modern media environments. Variations in adviser expertise, resource availability, and administrative support also pose continuing challenges, particularly in less resourced schools (Lorenzo et al., 2023).

This action research seeks to evaluate the extent to which campus journalists and school paper advisers agree on the effectiveness of CJCP implementation, perceived outcomes, and satisfaction with participation. It also aims to identify program components regarded as most beneficial, challenges encountered, and recommendations for improvement. The findings will inform the development of an improvement plan to strengthen the implementation, effectiveness, and sustainability of the CJCP within SDO Batangas City.

Furthermore, the study aims to generate empirical evidence that can guide policy refinement, enhance training designs, and optimize resource allocation. It also contributes to the growing body of literature on campus journalism program evaluation in the Philippine context, offering insights that may be adopted by other school divisions seeking to reinforce their campus journalism initiatives.

Literature Review

A review of existing literature provides the foundational concepts and perspectives that guide the evaluation of educational programs. These insights help situate the study within established knowledge and inform the analysis of the Campus Journalism Continuity Program (CJCP).

Educational and Collaborative Frameworks Informing the CJCP

Research on learning and skill development highlights the importance of experiential and socially mediated processes in educational programs, including campus journalism. Kolb's Experiential Learning Theory (ELT) describes learning as a continuous cycle in which individuals engage in concrete experiences, reflect on their performance, formulate conceptual understandings, and apply insights through active experimentation (Kolb, 1984; Kolb & Fry, 1975). Studies grounded

in ELT emphasize that activities such as workshops, hands-on trainings, and performance-based exercises strengthen learners' competence by allowing them to repeatedly practice and refine skills. This framework aligns closely with the components of the Campus Journalism Continuity Program (CJCP), where adviser workshops, student journalist trainings, and cliniquing sessions function as structured opportunities for experiential learning in journalism.

Literature on collaborative learning further reinforces the role of social interaction and guided participation in skill acquisition. Vygotsky's Social Constructivist Theory posits that learning is shaped by interpersonal exchanges, mentorship, and the shared construction of knowledge within a community (Vygotsky, 1978). In the context of campus journalism, this perspective is reflected in the involvement of the Batangas City Association of English and School Paper Advisers (BCAESSPA), which serves as a community of practice where advisers and student journalists learn through collaboration, coaching, and peer support. Such collaborative environments support program elements related to coordination, mentoring, and engagement.

In addition, literature on educational measurement emphasizes the use of validated tools to assess perceptions, behaviors, and learning outcomes. The application of psychometric principles ensures that evaluation instruments—such as Likert-scale items and open-ended prompts—produce reliable and meaningful data that can inform program improvement.

Perceptions on the Implementation, Effectiveness, Satisfaction, and Engagement in Campus Journalism Programs

Recent literature emphasizes that the successful implementation of campus journalism programs depends largely on structured training, consistent mentoring, and institutional support. Willnat et al. (2013) highlight that journalism programs become more effective when they include systematic instruction, guided practice, and repeated opportunities for students to refine their outputs. Studies further show that structured professional development for advisers increases their confidence in mentoring and improves the overall quality of student publications (Oliveira et al., 2024).

Training programs that emphasize ethical journalism, media literacy, and critical thinking are also shown to enhance student engagement. Vasist and Krishnan (2024) found that explicit instruction in journalistic values—such as fairness, verification, and responsible reporting—strengthens learners' ability to navigate misinformation and the challenges of the post-truth era. This is

consistent with campus journalism contexts where students benefit not only from technical skills but also from a deeper understanding of the ethical foundations of journalism.

Overall, literature indicates that both advisers and student journalists perceive journalism programs as highly valuable when implementation is consistent, mentorship is sustained, and training aligns with contemporary demands in journalism. Conversely, satisfaction and engagement decline when resource limitations, scheduling inconsistencies, and insufficient preparation of advisers hinder the program's continuity and effectiveness.

Most Beneficial Components of Campus Journalism Programs

Studies consistently identify structured workshops, skill-based training, and iterative feedback mechanisms—including cliniquing sessions—as the most beneficial elements of journalism programs. Willnat et al. (2013) and Oliveira et al. (2024) found that repeated feedback cycles and hands-on training significantly improve writing proficiency, accuracy, and students' overall readiness for competitions.

Cliniquing, in particular, allows learners to receive individualized, targeted feedback that strengthens their technical skills and confidence. Research also shows that mastery-based and experiential learning activities create deeper engagement by allowing students to practice journalistic tasks—such as editing, layout, and photography—in realistic newsroom conditions.

Mentoring likewise plays a central role. Folorunso et al. (2022) emphasize that structured mentoring networks support sustained skill development and improve learners' performance over time. This mirrors the Philippine context, where advisers' guidance is pivotal in preserving campus journalism programs across school years and transferring journalistic values to new cohorts of student journalists.

Collectively, the literature demonstrates that workshops, sustained mentoring, structured feedback, and ethics-focused training are the components most strongly associated with enhanced performance and positive learner outcomes in journalism programs.

Challenges and Barriers in the Implementation of Campus Journalism Programs

Despite their benefits, campus journalism programs face several challenges that hinder full implementation and reduce student engagement.

Heavy workloads and time constraints among advisers limit their ability to conduct regular training sessions and provide individualized mentoring—an issue also observed in developmental programs where limited time weakens consistency and engagement (Magee, 2025).

Resource limitations are likewise persistent barriers. Inadequate funding, lack of digital tools, insufficient access to multimedia equipment, and outdated instructional materials hinder the production of quality journalistic outputs. These disparities create unequal opportunities among schools and reduce the frequency and quality of publication cycles.

Organizational and communication gaps also weaken program implementation. Namujju, Acquah-Swanzy, and Ngoti (2023) note that unclear roles, weak coordination systems, and irregular communication channels lead to inefficiencies across various organizational settings. In the context of campus journalism, such gaps can result in missed deadlines, unclear guidelines, and misalignment between advisers and student journalists.

The increasing demand for digital journalism introduces further challenges. As Echle (2024) explains, modern journalism education requires integration of media literacy, ethical reporting, and digital tools—competencies that many schools struggle to provide due to limited training opportunities and lack of technological resources.

Research Questions

This study aims to evaluate the implementation, effectiveness, and overall impact of the Campus Journalism Continuity Program (CJCP) in the Division of Batangas City as perceived by campus journalists and school paper advisers. It further seeks to develop an improvement plan that will enhance its future implementation, effectiveness, and sustainability.

The study sought to answer the following specific research questions:

1. To what extent do campus journalists and school paper advisers perceive the following:
   1.1 implementation;
   1.2 effectiveness; and
   1.3 satisfaction and engagement in the Campus Journalism Continuity Program (CJCP)?
2. Which components or aspects of the CJCP are identified by participants as the most beneficial?

3. What challenges or barriers have participants encountered in the implementation and participation in the CJCP?
4. What suggestions do participants offer to strengthen the future implementation of the CJCP?
5. What improvement plan may be formulated to enhance the implementation, effectiveness, and sustainability of the CJCP in the Division of Batangas City?

METHODOLOGY

This study employed a descriptive research design to evaluate the implementation, effectiveness, and participant experiences in the Campus Journalism Continuity Program (CJCP) in the Division of Batangas City. Quantitative data were collected through a structured Likert-scale survey measuring perceptions of implementation, effectiveness, and satisfaction and engagement. Qualitative data from open-ended questions supplemented these findings by capturing participants' views on beneficial components, challenges encountered, and suggestions for improvement. This design allowed the study to describe numerical trends and contextual insights without integrating data strands, providing a clear understanding of stakeholder perceptions and informing the development of an improvement plan.

Research instruments

A total of 187 respondents participated in the study, consisting of 86 school paper advisers and 101 campus journalists from elementary, junior high, and senior high schools in the Division of Batangas City. A researcher-developed survey questionnaire served as the primary instrument for data collection. The tool contained Likert-scale items measuring perceptions of CJCP implementation, program effectiveness, and participant satisfaction and engagement. It also included open-ended questions designed to elicit qualitative insights regarding the most beneficial components of the program, challenges experienced during implementation, and recommendations for strengthening CJCP. The questionnaire underwent expert validation to ensure clarity, relevance, and content validity. Purposive sampling was used to select respondents who had direct involvement in CJCP activities such as adviser trainings, student journalist workshops, cliniquing sessions, school paper reviews, and press conference preparations.

Data Analysis

Quantitative data gathered from the Likert-scale items were analyzed using descriptive statistics, specifically mean scores and standard deviations, to determine respondents' levels of agreement regarding program implementation, effectiveness, and satisfaction and engagement. To identify whether significant differences existed between the perceptions of advisers and campus journalists, independent samples t-tests were conducted for each major domain. Meanwhile, qualitative responses from the open-ended items were analyzed through thematic analysis following Braun and Clarke's (2006) framework. This process involved familiarization with the responses, systematic coding of significant statements, identification of emerging patterns, and clustering of codes into broader themes aligned with the study's research questions. Findings from both quantitative and qualitative analyses were integrated in the discussion to highlight trends, divergences, and insights relevant to CJCP improvement planning.

Ethical Considerations

Ethical protocols were observed throughout the conduct of the study. Permission was secured from the Schools Division Office of Batangas City prior to data collection. Participants were informed of the study's purpose, assured of the confidentiality and anonymity of their responses, and notified that participation was voluntary. Data gathered were used solely for research and program improvement purposes. All information was treated with strict confidentiality and stored securely to protect participant privacy.

RESULTS and DISCUSSION

This section presents the findings of the evaluation of the Campus Journalism Continuity Program (CJCP) implemented by the Schools Division Office (SDO) of Batangas City. Quantitative and qualitative data from school paper advisers and campus journalists were analyzed to assess program implementation, perceived effectiveness, participant satisfaction, and improvement needs.

Table 1

Demographic Profile of Respondents

Role	Frequency	Percentage (%)
School Paper Advisers	86	45%
Campus Journalists	101	55%
Total	**90**	**100%**

Table 1 shows the demographic profile of the respondents, composed equally of 86 school paper advisers and 86 campus journalists, each group representing 50 percent of the total respondents. This equal distribution ensures balanced perspectives from both facilitators and participants of the Campus Journalism Continuity Program (CJCP).

Table 2

School Paper Advisers' Perceptions on Program Implementation

Implementation Indicators	Mean	SD	Verbal Interpretation
CJCP activities are regularly scheduled and well-communicated	4.87	0.34	Strongly Agree
Adviser trainings have clear objectives and relevant content	4.88	0.33	Strongly Agree
Student journalist trainings cover diverse journalistic skills	4.87	0.35	Strongly Agree
Cliniquing sessions are tailored to category needs	4.85	0.36	Strongly Agree
School paper reviews provide constructive feedback	4.84	0.37	Strongly Agree
Post-RSPC monitoring assesses progress and gaps	4.82	0.38	Strongly Agree
CJCP is inclusive across all grade levels	4.83	0.36	Strongly Agree
Resource materials are current and relevant	4.85	0.35	Strongly Agree
Coordination between school heads and CJCP coordinators is strong	4.81	0.39	Strongly Agree
Logistical support is adequate and timely	4.79	0.40	Strongly Agree
Mean Average	**4.84**	**0.36**	**Strongly Agree**

Table 2 shows a very high level of agreement among school paper advisers regarding the effective implementation of CJCP activities. They affirmed the

relevance and purposefulness of the trainings (M = 4.88, SD = 0.33) and the comprehensive skill coverage provided to student journalists (M = 4.87, SD = 0.35). Although logistical support rated slightly lower (M = 4.79, SD = 0.40), it was still viewed as adequate. These results are consistent with Castro and Miranda (2022), who highlighted the role of strong training delivery and capacity-building in effective campus journalism implementation.

Table 3

Campus Journalists' Perceptions on Program Implementation

Implementation Indicators	**Mean**	**SD**	**Verbal Interpretation**
CJCP activities are regularly scheduled and well-communicated	4.61	0.69	Strongly Agree
Adviser trainings/workshops have clear objectives and relevant content	4.88	0.33	Strongly Agree
Student journalist trainings cover diverse journalistic skills	4.70	0.58	Strongly Agree
Cliniquing sessions are tailored to category needs	4.68	0.66	Strongly Agree
School paper reviews provide constructive feedback	4.70	0.46	Strongly Agree
Post-RSPC monitoring assesses progress and gaps	4.67	0.63	Strongly Agree
CJCP is inclusive across all grade levels	4.74	0.57	Strongly Agree
Resource materials in trainings and contests are current and relevant	4.68	0.57	Strongly Agree
Coordination between school heads and CJCP coordinators is strong	4.74	0.58	Strongly Agree
Logistical support for activities is adequate and timely	4.67	0.59	Strongly Agree
Mean Average	**4.71**	**0.57**	**Strongly Agree**

Table 3 shows that campus journalists strongly agreed on the effective implementation of CJCP activities (M = 4.71, SD = 0.57). They rated adviser and student trainings highly, affirmed the usefulness of cliniquing sessions and school paper reviews, and viewed coordination, resources, and logistical support as adequate. These findings align with David (2020) that well-designed workshops

and feedback mechanisms strengthen students' skills and engagement, reflecting the consistently positive ratings across CJCP implementation indicators.

Table 4

School Paper Advisers' Perceptions on Program Effectiveness

Implementation Indicators	Mean	SD	Verbal Interpretation
Effectiveness Indicators	4.92	0.28	Strongly Agree
Improved writing and editing skills of journalists	4.90	0.30	Strongly Agree
Increased RSPC/NSPC qualifiers	4.89	0.31	Strongly Agree
Higher quality school papers	4.88	0.32	Strongly Agree
Enhanced collaboration among advisers	4.91	0.29	Strongly Agree
Increased student confidence	4.90	0.30	Strongly Agree
Culture of excellence fostered	4.84	0.36	Strongly Agree
Integration of digital journalism skills	4.89	0.31	Strongly Agree
Sustained high rankings in competitions	4.87	0.34	Strongly Agree
Effective application of cliniquing feedback	4.88	0.32	Strongly Agree
Average Mean	**4.89**	**0.31**	**Strongly Agree**

School paper advisers perceived the CJCP as highly effective in enhancing journalistic outputs and fostering a culture of excellence. The highest rating was for improved writing and editing skills (M = 4.92, SD = 0.28), indicating that advisers see their training efforts translated into stronger student performance. Increases in RSPC/NSPC qualifiers (M = 4.90, SD = 0.30) and higher-quality school papers (M = 4.88, SD = 0.32) further reflect the program's impact. Although the integration of digital journalism skills scored slightly lower (M = 4.84, SD = 0.36), advisers still viewed it positively while recognizing a need for continued enhancement in digital competencies. These results are consistent with David (2020), who found that structured journalism programs significantly improve students' writing skills and competition outcomes. Likewise, Lorenzo, Bautista, and Cruz (2023) highlighted the role of mentoring and targeted training in developing student confidence and producing high-quality journalistic work.

Table 5

Campus Journalists' Perceptions on Program Effectiveness

Implementation Indicators	Mean	SD	Verbal Interpretation
CJCP activities are regularly scheduled and well-communicated	4.61	0.69	Strongly Agree
Adviser trainings/workshops have clear objectives and relevant content	4.88	0.33	Strongly Agree
Student journalist trainings cover diverse journalistic skills	4.70	0.58	Strongly Agree
Cliniquing sessions are tailored to category needs	4.68	0.66	Strongly Agree
School paper reviews provide constructive feedback	4.70	0.46	Strongly Agree
Post-RSPC monitoring assesses progress and gaps	4.67	0.63	Strongly Agree
CJCP is inclusive across all grade levels	4.74	0.57	Strongly Agree
Resource materials in trainings and contests are current and relevant	4.68	0.57	Strongly Agree
Coordination between school heads and CJCP coordinators is strong	4.74	0.58	Strongly Agree
Logistical support for activities is adequate and timely	4.67	0.59	Strongly Agree
Average Mean	**4.71**	**0.57**	**Strongly Agree**

The data collected from campus journalists reveals a very high level of agreement with the implementation of CJCP activities. Journalists particularly appreciated the clarity and relevance of adviser trainings (M = 4.88, SD = 0.33), indicating strong support for their development. They also affirmed the effectiveness of student journalist trainings (M = 4.70, SD = 0.58), which helped them gain diverse journalistic skills.

While all indicators received "Strongly Agree" ratings, CJCP scheduling (M = 4.61, SD = 0.69) and logistical support (M = 4.67, SD = 0.59) showed slightly more variability, suggesting areas where consistency could be further enhanced. These findings underscore the CJCP's success in fostering journalistic excellence and inclusivity among campus journalists.

These results are consistent with Thomas and Feng (2021) noting that student satisfaction in journalism programs strongly depends on consistent implementation, access to quality training, and institutional support.

Table 6

School Paper Advisers' Satisfaction and Engagement

Implementation Indicators	Mean	SD	Verbal Interpretation
Overall satisfaction with CJCP	4.89	0.31	Strongly Agree
Active engagement in activities	4.87	0.34	Strongly Agree
Outcomes meet expectations	4.88	0.32	Strongly Agree
Motivation to continue participation	4.91	0.29	Strongly Agree
Relevance to their role as journalist coaches	4.90	0.30	Strongly Agree
Adequate support and recognition	4.79	0.40	Strongly Agree
Clear and timely communication	4.85	0.35	Strongly Agree
Opportunities to provide feedback	4.84	0.36	Strongly Agree
Positive impact on their professional growth	4.88	0.32	Strongly Agree
Willingness to recommend CJCP	4.92	0.28	Strongly Agree
Average Mean	**4.87**	**0.33**	**Strongly Agree**

School paper advisers expressed strong satisfaction with the CJCP, reflected in high motivation to continue participating (M = 4.91, SD = 0.29) and a strong willingness to recommend the program (M = 4.92, SD = 0.28). They also affirmed its relevance to their roles (M = 4.90, SD = 0.30) and its positive contribution to their professional growth. The slightly lower rating for "Adequate support and recognition" (M = 4.79, SD = 0.40) suggests the need for stronger institutional reinforcement. These results align with Rathan et al. (2025), who noted that teacher engagement is strengthened when educators feel supported, valued, and able to see meaningful impact in their work. This indicates that the CJCP effectively promotes adviser engagement, though additional recognition and support may further enhance their satisfaction.

Campus journalists expressed strong satisfaction with the Campus Journalism Continuity Program (CJCP), particularly in areas that reflect both personal and professional growth. Among the various indicators, the highest-rated were Willingness to recommend CJCP (M = 4.78, SD = 0.50), Relevance to journalist/adviser roles (M = 4.76, SD = 0.51), and Positive impact on professional growth (M = 4.74, SD = 0.52). These results suggest that the program is not only well-received but also perceived as highly relevant and beneficial to the development of campus journalists.

Table 7

Campus Journalists' Satisfaction and Engagement

Implementation Indicators	Mean	SD	Verbal Interpretation
Improved writing and editing skills	**4.76**	**0.43**	**Strongly Agree**
Increased RSPC/NSPC qualifiers	4.54	0.72	Strongly Agree
Higher quality school papers	4.58	0.64	Strongly Agree
Enhanced adviser collaboration	4.80	0.47	Strongly Agree
Increased student confidence	4.68	0.53	Strongly Agree
Culture of excellence fostered	4.71	0.60	Strongly Agree
Integration of digital journalism skills	4.68	0.61	Strongly Agree
Sustained high rankings in competitions	4.55	0.63	Strongly Agree
Application of cliniquing feedback	4.78	0.42	Strongly Agree
Strengthened civic engagement through journalism	4.68	0.55	Strongly Agree
Improved writing and editing skills	4.76	0.43	Strongly Agree
Average Mean	**4.68**	**0.55**	**Strongly Agree**

Although the indicator Outcomes meet expectations showed slightly more variability (SD = 0.72), it still received a "Strongly Agree" rating. This indicates that, overall, the program's goals are aligned with the experiences and expectations of its participants, reinforcing its effectiveness and value in the campus journalism landscape.

These outcomes align with David (2020), who found that structured training, guided practice, and cliniquing significantly enhance students' writing proficiency, confidence, and competition performance—reflecting the strong effectiveness scores seen in the CJCP.

Table 8

Statistical Difference between the Responses of School Paper Advisers' and Campus Journalists

	Advisers' Average Mean	Journalists' Average Mean	t-statistic	p-value	Interpretation
Program Implementation	4.84	4.71	5.5063	< 0.0001	Significant Difference
Program Effectiveness	4.89	4.71	7.6509	< 0.0001	Significant Difference
Satisfaction & Engagement	4.87	4.68	6.2600	≈ 0.00002	Significant Difference

Table 8 reveals significant differences between advisers' and campus journalists' perceptions of the CJCP across implementation, effectiveness, and satisfaction/engagement. Although both groups rated the program positively, advisers consistently reported higher levels of implementation quality and effectiveness, likely due to their administrative involvement and broader understanding of program processes. Student journalists, who focus more on practical training and experience, perceived these areas slightly lower. These differences mirror the findings of Carlobos and Callo (2025), who noted that advisers tend to view campus journalism programs more favorably because of their organizational roles, and Tasmim and Atikuzzaman (2025), who reported that perception gaps between journalists and authorities commonly arise from differing responsibilities and expectations.

The given findings underscore the themes that emerged from the qualitative analysis.

1. CJCP Components or Aspects Considered Most Beneficial

The implementation of the Campus Journalism Continuity Program (CJCP) revealed several components that advisers consistently identified as highly beneficial to campus journalism. Structured trainings and workshops—such as bootcamps, seminars, and hands-on sessions—were highlighted for effectively developing essential journalistic skills in both advisers and student journalists. The involvement of competent speakers further strengthened these learning experiences, supporting advisers' professional growth and enhancing their capacity to mentor students.

Cliniquing sessions also played a pivotal role by providing targeted feedback that improved the quality of journalistic outputs and boosted students' confidence, particularly in preparation for competitions. Beyond technical skills, advisers noted that CJCP promotes student empowerment by enhancing critical thinking, media literacy, and ethical awareness, enabling learners to engage responsibly with real-world issues.

The program likewise deepened adviser engagement and strengthened mentoring relationships, reigniting their passion for campus journalism and reinforcing their commitment to fostering student excellence. CJCP was also valued for sustaining continuity in campus journalism, ensuring the transfer of skills, knowledge, and values across cohorts. Its focus on ethical journalism—emphasizing integrity, fairness, and responsibility—was seen as essential for

maintaining publication credibility and preparing students for future communication roles.

Overall, advisers viewed the CJCP as a comprehensive and impactful initiative that strengthens both the technical and ethical foundations of campus journalism. Through structured training, meaningful feedback, and sustained institutional support, the program fosters a culture of excellence that contributes to the long-term vitality of campus journalism in Batangas City.

2. Challenges/Barriers Encountered in CJCP Implementation and SPA Participation

Both school paper advisers and campus journalists identified several challenges affecting the implementation of the CJCP. The most common barrier across groups was time constraints, with advisers reporting heavy teaching loads and overlapping responsibilities, while students struggled to balance academic requirements with journalism activities. Resource limitations also hindered participation, as inadequate funding, limited access to computers and printing equipment, and insufficient digital tools affected output quality and training readiness.

Concerns related to training access and scheduling were frequently raised. Advisers found after-class sessions difficult to attend, and students often encountered conflicts between workshops and their regular classes or school events. Logistical issues, such as travel distance and venue accessibility, further restricted participation for some.

Additional barriers included administrative support gaps, such as inconsistent communication and rigid guidelines, which advisers felt complicated program implementation. Students also mentioned communication and feedback challenges, expressing hesitancy in voicing concerns and difficulty managing criticism. A few respondents from both groups cited issues related to health, availability, and emotional strain, which occasionally disrupted engagement.

Some students reported experiencing no significant barriers, suggesting that challenges vary by school context and available support. Overall, these concerns highlight the need for improved scheduling, resource provision, administrative coordination, and supportive mentoring to strengthen CJCP implementation.

3. SPAs and CJs Suggestions to Strengthen CJCP Implementation

School paper advisers and campus journalists offered several recommendations to enhance the CJCP. A major suggestion was to provide more

consistent, updated, and skill-focused training, including annual bootcamps, summer sessions, longer workshops, and mastery-oriented activities covering writing, editing, layout, photography, and digital journalism. Both groups emphasized that sustained, structured training is essential for developing competence and keeping pace with modern journalism trends.

Participants also recommended improving the program structure, such as conducting earlier cliniquing sessions, offering focused coaching for group categories, strengthening the flow of information, and expanding support for school paper management. Scheduling flexibility was another key concern; advisers and students requested training calendars that avoid academic conflicts, clearer communication of schedules, and dedicated time for journalism tasks.

Strengthening mentorship and adviser support was likewise highlighted. Students suggested individualized coaching, involvement of former winners as mentors, and enhanced adviser training to ensure effective guidance. Both groups also called for greater recognition and institutional support, noting that clearer academic policies and acknowledgment of adviser efforts would motivate participation.

Finally, respondents stressed the need for improved resources and accessibility, including better funding for materials and equipment, localized school-level trainings, and digital support through online modules and tutorials. Integrating modern journalism practices—such as media literacy, ethical reporting, and digital tools—was also recommended to align the CJCP with contemporary media demands.

Overall, these recommendations reflect a shared desire for a more responsive, well-supported, and future-ready CJCP that meets the evolving needs of advisers and campus journalists.

The findings of this study provide important insights into the overall impact of CJCP.

1. The Importance of Structured Training, Cliniquing, and Journalistic Values in Strengthening CJCP Implementation

Findings reveal that structured training and workshops are the most valuable components of the CJCP, as advisers emphasized their strong influence on improving both their own competencies and those of campus journalists. Bootcamps, seminars, and hands-on sessions—facilitated by knowledgeable resource persons—enable participants to develop essential skills in writing, editing, and other journalistic practices, while also strengthening advisers'

capacity to mentor effectively. Cliniquing sessions further reinforce learning by providing focused, individualized feedback that helps students refine their outputs and better prepare for competitions. Beyond technical proficiency, advisers highlighted that the program contributes substantially to developing students' critical thinking, media literacy, and ethical awareness, equipping them to engage responsibly with issues within their school and community. The CJCP also enhances adviser involvement and supports the continuity of campus journalism by ensuring the sustained transfer of skills and journalistic values across cohorts. These findings align with research demonstrating that structured professional development, iterative feedback processes, and explicit training in ethical journalism significantly improve journalistic performance and the overall quality of student publications (Willnat et al., 2013; Oliveira et al., 2024; Vasist & Krishnan, 2024).

2. Implications of Identified Challenges on CJCP

Time constraints and heavy workloads limit advisers' and students' consistent participation, reducing opportunities for skills practice and weakening newsroom routines, echoing concerns about restricted engagement in developmental programs. Resource shortages further create unequal learning conditions, as limited funding and inadequate access to digital tools hinder the production of quality outputs and contribute to inconsistent publication cycles (Magee, 2025).

Coordination and communication gaps also disrupt program implementation, paralleling issues in other sectors where unclear roles and weak communication lead to inefficiencies (Namujju, Acquah-Swanzy, & Ngoti, 2023). In school journalism, such gaps can result in unclear guidelines, missed deadlines, and reduced adviser–student alignment. Additionally, students' hesitancy to express concerns and challenges in handling feedback highlight the need for stronger mentoring practices that build confidence and support collaboration.

3. *Key Recommendations for a More Responsive and Future-Ready CJCP*

The recommendations of school paper advisers and campus journalists highlight the need for a more sustained, updated, and skill-focused CJCP. Participants emphasized annual bootcamps, extended workshops, and mastery-based activities to strengthen competencies in writing, editing, layout, photography, and digital journalism. These suggestions align with calls for competency-based curricula that respond to the demands of modern journalism,

especially in the context of the post-truth era and increasing misinformation (Vasist & Krishnan, 2024). The findings also reaffirm the value of structured training and hands-on workshops, as advisers noted their strong impact on developing student and adviser competencies. Cliniquing sessions, particularly when conducted earlier, help refine outputs through targeted feedback, supporting research that highlights the effectiveness of iterative feedback and ethics-focused training in improving journalistic performance (Willnat et al., 2013; Oliveira et al., 2024).

Participants also stressed the importance of improving program structure and scheduling. Clearer training calendars, earlier announcements, and alignment with academic timelines are necessary to minimize conflicts—an issue consistent with studies showing that coordinated academic scheduling enhances program engagement (Aksar, Siddiqua, & Zainal Abidin, 2025). Strengthening communication systems and support for school paper management was likewise identified as essential for smoother CJCP implementation.

Mentorship emerged as another key area for improvement. Students suggested individualized coaching and involvement of experienced mentors, echoing mentoring models in academic support systems where networks foster sustained skill development (Folorunso et al., 2022). Such support is vital, as the CJCP relies on advisers to ensure continuity of journalistic skills and values across cohorts.

Finally, respondents emphasized the need for better resources and accessibility, including increased funding, improved equipment, localized trainings, and digital learning modules. Integrating modern journalism practices—such as media literacy, ethical reporting, and digital tools—reflects broader recommendations for preparing students to participate responsibly in contemporary media environments (Echle, 2024).

CONCLUSION AND RECOMMENDATIONS

The evaluation of the Campus Journalism Continuity Program (CJCP) implemented by the Schools Division Office of Batangas City demonstrates that the program is highly effective, well-structured, and strongly aligned with its goals of developing journalistic skills, sustaining quality campus publications, and nurturing ethical and responsible young communicators. High ratings across program implementation, effectiveness, and satisfaction affirm that the CJCP delivers relevant and comprehensive training, promotes technical and ethical

competency, and enhances the professional growth of both school paper advisers and campus journalists. Structured workshops, hands-on trainings, and cliniquing sessions were identified as the program's most transformative components, enabling participants to refine their writing, editing, and layout skills while also building confidence and critical awareness. Despite these strengths, the presence of statistically significant differences in perceptions between advisers and students highlights areas where the program's delivery and experience may not be equally felt. Students' relatively lower ratings, along with qualitative feedback, point to persistent challenges such as time constraints, limited resources, scheduling conflicts, logistical issues, and inconsistent administrative support. These factors, if not addressed, could hinder equitable participation and limit the program's long-term sustainability. Thus, a forward-looking improvement plan is essential to refine implementation, address stakeholder concerns, strengthen support structures, and ensure the CJCP's continued relevance in an evolving media environment.

To build on its strong foundation and respond to the challenges and gaps identified, the CJCP must enhance and diversify its training initiatives by institutionalizing annual bootcamps, extended workshops, and modular learning options that address advanced skills such as digital journalism, multimedia storytelling, and investigative reporting. Engaging industry practitioners as resource persons and developing differentiated training for varying skill levels will help ensure that both advisers and students receive contextually relevant and future-ready development opportunities. Strengthening program structure and scheduling is also crucial; aligning CJCP activities with the academic calendar, communicating schedules earlier, and designating time for journalism tasks within school routines will minimize conflicts and support consistent participation. Institutional support must likewise be reinforced through clearer school-level directives, recognition systems for advisers and student journalists, and the integration of journalism responsibilities into official workloads and improvement plans. To bridge perceptual gaps, the program should adopt more inclusive feedback mechanisms, such as joint planning sessions, focus group discussions, and participatory committees that amplify both adviser and student voices in decision-making. Adequate resource allocation is another essential priority, requiring schools to invest in updated equipment, digital tools, and training materials, while exploring resource-sharing models and localized trainings to ensure equitable access. Finally, the SDO should craft and implement

a comprehensive improvement plan with clear objectives, timelines, and monitoring and evaluation systems to ensure sustained progress, institutionalization of best practices, and continuity of CJCP initiatives across leadership changes. Through these coordinated strategies, the CJCP can continue to elevate campus journalism in Batangas City, nurture a culture of excellence, and empower the next generation of student journalists and adviser-mentors.

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EMPOWERING LEARNERS FOR GLOBAL COMPETENCE: ENHANCING PISA PREPARATION IN PAHARANG INTEGRATED SCHOOL

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Abstract: This study explored the effectiveness of localized PISA-aligned strategies in improving student performance and readiness for international large-scale assessments. Using a descriptive design, quantitative data were obtained from pre- and post-tests administered over an eight-week intervention, while qualitative data were gathered through surveys and focus group discussions among teachers and students. Digital tools such as Khan Academy, Jeopardy, Wordwall, and Padlet were utilized alongside formative assessments, higher-order thinking tasks, and real-world simulations. Findings revealed that both students and teachers perceived the strategies as highly effective in enhancing critical thinking, problem-solving, reading comprehension, and digital literacy. Significant improvement was observed in Mathematics, followed by Science and English. However, issues such as limited resources and connectivity were noted. The study recommended continued use of interactive, differentiated, and literacy-focused strategies to strengthen global competence among learners.

Keywords: 21st-century skills, global competence, learner-centered strategies, PISA preparations, student engagement

INTRODUCTION

The Philippines has participated in several cycles of the Programme for International Student Assessment (PISA), with results consistently revealing persistent underperformance among Filipino learners. In the 2018 cycle, students scored 353 in Mathematics, 340 in Reading, and 357 in Science—substantially below the OECD average (OECD, 2019). The 2022 cycle showed only minimal gains, with scores of 355, 347, and 356, respectively (OECD, 2023). These figures highlight the systemic challenges within the Philippine education system,

including insufficient instructional time, limited access to learning resources, and socioeconomic disparities (DepEd, 2024). The upcoming PISA 2025 cycle, therefore, presents both an opportunity and a challenge to address these gaps through deliberate, evidence-based strategies that enhance students' global competence.

In response, the Department of Education (DepEd), through the Bureau of Education Assessment (BEA), will administer PISA 2025 from March 10 to April 11, using a computer-based format. This initiative underscores the urgency of equipping Filipino learners with academic proficiency, digital literacy, and higher-order thinking skills necessary to thrive in a globalized, technology-driven world. To support this, Special Program Funds (SPF) have been allocated for teacher training, logistical support, and regional coordination (DepEd Convenes Education Partners, 2024)).

At the school level, Paharang Integrated School—one of the 28 participating institutions in Region IV-A CALABARZON—faces multiple challenges in preparing students for PISA. Learners often struggle with reading comprehension and the application of knowledge in unfamiliar contexts, particularly in English, Mathematics, and Science. These learning gaps stem from limited vocabulary, weak foundational knowledge, and low motivation during review sessions. Compounding these issues is the lack of digital access and skills needed to navigate PISA's computer-based assessments.

Teachers likewise encounter barriers in aligning instruction with the PISA framework. Time constraints, inadequate resources for developing PISA-type tasks, and difficulties in sustaining engagement in large, mixed-ability classrooms hinder implementation. Many educators are still unfamiliar with PISA's emphasis on higher-order thinking, interdisciplinary learning, and real-world problem-solving, creating a gap between traditional classroom practices and global performance standards.

Grounded on constructivist and socio-cognitive learning theories, this study recognizes that meaningful learning occurs when students actively engage in problem-solving and knowledge construction within authentic contexts. The research thus aims to evaluate the effectiveness of localized PISA-aligned strategies implemented at Paharang Integrated School in enhancing students' readiness for international assessments. It further seeks to identify implementation challenges and recommend practices that strengthen global

competence through learner-centered, technology-integrated, and skills-based approaches.

Literature Review

According to the United Nations Development Programme (2022), improvements in education are strongly correlated with gains in health, income, and overall quality of life. Therefore, enhancing students' performance in assessments like PISA is not only a matter of academic concern but also a critical driver of national competitiveness and socio-economic progress. Furthermore, there is growing recognition of the link between PISA performance and broader developmental indicators, such as the Human Development Index (HDI).

In support of these claims, several studies underscore the effectiveness of targeted preparation strategies in improving student performance in international assessments. For example, Hattie (2015) emphasized that formative assessment, student-centered learning, and evidence-based teaching strategies significantly improve educational outcomes. These approaches make learning more visible, enabling both teachers and students to track progress and adjust accordingly. Similarly, the OECD (2019) highlighted those strategies promoting higher-order thinking skills (HOTS)—such as critical thinking, creativity, and problem-solving—are essential for success in PISA. Since the assessment tasks demand the application of knowledge in unfamiliar, real-world contexts, teaching practices must transcend rote memorization and focus on analytical and evaluative skills.

Additionally, research by Zamir and Cohen-Azaria (2021) on Israeli teachers revealed a lack of familiarity with the PISA framework, resulting in misaligned teaching practices. Their findings emphasized the need for professional development programs that help educators integrate PISA-aligned strategies into their instruction. Teachers who received proper training were more capable of implementing methods that fostered student success in global assessments. In the Philippine context, Faustino (2024) proposed a PISA-aligned science curriculum for Grades K–10 that emphasizes context-based learning and global competence, prioritizing real-world applications and critical thinking.

Taken together, these findings underscore the multifaceted nature of effective PISA preparation, which must integrate cognitive, emotional, and contextual supports to succeed. Thus, this research titled "Empowering Learners for Global Competence: Enhancing PISA Preparation in Paharang Integrated

School" aims to explore, develop, and evaluate strategic interventions to improve student performance in PISA. By drawing from international best practices and aligning with Human and Social Capital theories, the study intends to offer actionable insights for educators, school leaders, and policymakers. Ultimately, this research supports the broader national objective of elevating educational standards, ensuring that Filipino learners are equipped with the competencies necessary to succeed in an interconnected, knowledge-driven global society.

Research Questions

This study aimed to evaluate the effectiveness of PISA preparation strategies implemented at Paharang Integrated School by examining student performance outcomes, exploring the level of student engagement, identifying the challenges faced by both teachers and students, and proposing strategic activities to enhance the school's efforts in empowering learners for global competence.

Specifically, this sought to answer the following questions:

1. How effective are the PISA preparation strategies implemented in Paharang Integrated School in improving student performance, as teachers and students perceive?
2. What is the impact of student engagement in PISA preparation sessions on their test performance based on their 8-week pre- and post-test results?
3. What challenges do students and teachers face in implementing and participating in PISA preparation and review sessions?
4. What strategic activities may be proposed to enhance the effectiveness of PISA preparation in improving student performance?

METHODOLOGY

The study was conducted at Paharang Integrated School and involved participants of the PISA Skills Enhancement Program (PSEP) during school year 2024 – 2025. A purposive sampling technique was used to select individuals directly engaged in the intervention. A total of 41 students from Grades 8, 9, and 10 who completed the eight-week PSEP served as the primary respondents for the quantitative component. Additionally, 10 teachers who facilitated the implementation and a selection of student participants were included in the qualitative phase through interviews and classroom observations.

The materials used in the study included digital platforms such as Khan Akademy and Frontlearners, which provided online learning management, pre- and post-assessments, and scenario-based problem-solving activities aligned with PISA domains—reading literacy, mathematical literacy, and scientific literacy. Digital learning devices such as laptops, tablets, and desktop computers were provided by the school, supported by reliable internet connectivity and educational software aligned with the PISA framework. Interview guides was used for qualitative data collection, while lesson exemplars and teacher training modules supported the instructional and capacity-building components.

Prior to implementation, the researcher obtained the necessary approvals from the school, district, and division research committees to comply with the DepEd research ethics protocols. Coordination meetings were held with school head and participating teachers to align schedules and objectives. The program began with diagnostic pre-tests to establish baseline competencies in English, Mathematics, and Science. Over the eight-week period, students participated in weekly performance-based activities, online assessments, and teacher-facilitated discussions. Post-tests were administered at the end of the intervention to measure improvement. Teachers monitored progress through the learning platforms' analytics and adjusted lesson delivery accordingly.

Ethical standards were strictly upheld throughout the research process. Approval from relevant DepEd research committees was secured prior to data collection. Informed consent was obtained from all participants, and parental consent was secured for student participants. They were informed about the study's purpose, procedures, voluntary nature of participation, and their right to withdraw at any time. Confidentiality and anonymity were maintained by coding personal data and storing records securely. No identifying information was disclosed in any reports or publications. The research strictly adhered to the Data Privacy Act of 2012 and DepEd's ethical guidelines for educational research.

Research design

This study utilized a descriptive design to comprehensively assess the effectiveness of the PISA Skills Enhancement Program (PSEP) implemented at Paharang Integrated School. The PSEP was an eight-week structured intervention that integrated blended learning, real-world task simulations, and collaborative learning strategies. Weekly performance-based activities were aligned with the PISA domains—reading literacy, mathematical literacy, and scientific literacy—

using digital resources such as Khan Academy and scenario-based problem-solving tasks. The program featured differentiated instruction, formative assessments through pre- and post-tests, and continuous monitoring by teacher-reviewers, school heads, division and regional supervisors, DepEd Central Office, and Khan Academy representatives. Support mechanisms included teacher training, improved digital infrastructure, and stakeholder involvement to ensure shared responsibility and sustainable implementation.

Research instruments

The study employed both quantitative and qualitative instruments to obtain comprehensive data. Quantitative data were collected through pre-tests and post-tests administered to 41 Grade 8–10 students who completed the eight-week intervention. These tests were designed to measure learning progress in the core PISA domains and were administered through Khan Academy and Frontlearners, which utilized standardized rubrics and automated scoring systems to ensure reliability and objectivity. Qualitative data were gathered through semi-structured interviews with 10 teachers and selected student participants, focusing on their experiences, perceptions, and reflections regarding the PSEP implementation.

Data Analysis

The collected data were analyzed using both quantitative and qualitative procedures. Quantitative data from the pre-tests and post-tests were statistically compared to determine performance improvement in English, Mathematics, and Science. For the qualitative data, interview responses were transcribed, coded, and thematically analyzed to identify emerging patterns, insights, and challenges encountered during implementation. The combined analysis provided a holistic understanding of the program's effectiveness and its implications for enhancing PISA readiness among learners.

RESULTS AND DISCUSSION

1. Perception on the Effectiveness of PISA Preparation Strategies Implementation in Paharang Integrated School in Improving Student Performance

Students Responses

Findings from both students and teachers at Paharang Integrated School revealed overwhelmingly positive perceptions of the PISA Preparation Strategies implemented through the PISA Skills Enhancement Program (PSEP). Students frequently cited the use of digital learning platforms, particularly Khan Academy and Frontlearners, as the most effective tools for self-paced learning, test simulations, and interactive review. These platforms enhanced content mastery and digital literacy, allowing learners to engage in activities that developed critical thinking, reading comprehension, and mathematical reasoning—key competencies in PISA. As one student shared, "Khan Academy helped us track our progress through pre- and post-tests," reflecting Hattie's (2021) assertion that formative assessment makes learning visible and measurable.

Students also highlighted gamified and interactive strategies such as Math Duck, Jeopardy, Phet Simulations, and Math vs. Zombies, which made learning enjoyable and motivating. These activities promoted collaboration, problem-solving, and creativity—skills emphasized by OECD (2019) and Pan & Carpenter (2024) as essential for success in international assessments. The integration of real-world applications and group tasks further fostered communication, engagement, and peer collaboration, aligning with Stang and Roll's (2013) finding that teacher-student interaction enhances academic gains.

Teachers' Responses

Teachers similarly affirmed the effectiveness of technology-based and practice-oriented instruction. They utilized tools like Jeopardy, Canva, Google Workspace, Padlet, Quizziz, and Phet Simulations to make lessons more interactive and to visualize abstract concepts. Many incorporated past PISA test items and higher-order thinking tasks based on Bloom's and SOLO taxonomies, observing significant improvements in students' reasoning and problem-solving. One teacher reflected, "Integrating real-world reading and writing tasks

strengthened students' critical thinking and digital literacy," echoing Faustino's (2024) advocacy for context-based, globally aligned instruction.

Both students and teachers valued collaborative and formative approaches, including peer tutoring and group discussions, which promoted trust, active participation, and collective problem-solving. This supports Coleman's Social Capital Theory, emphasizing relationships and shared responsibility in academic success, and Schultz and Becker's Human Capital Theory, which underscores education as an investment in future productivity.

In summary, both groups perceived the PISA preparation strategies as highly effective in enhancing engagement, digital competence, and academic readiness. The integration of digital tools, gamified learning, real-world applications, and collaborative strategies not only improved performance but also fostered 21st-century skills and global competence. These findings affirm that sustained innovation, teacher capacity-building, and evidence-based instruction are vital for improving student performance and aligning school practices with international standards.

2. Impact of Student Engagement in PISA Preparation Sessions on Their Test Performance Based on Their 8-Week Pre- and Post- Test Results

Table1

Pre-test and Post-test Results on Week 1

Subject	Pre-test Week 1			Post-test Week 1		
	Khan Set 1	Khan Set 2	Average	Khan Set 1	Khan Set 2	Average
English	74.24	53.05	63.65	98.2	93.41	95.81
Science	91.29	82.15	86.72	100	96.39	98.2
Mathematics	70.71	71.85	71.28	94.85	96.12	95.49

The week 1 results at Paharang Integrated School showed notable improvement across subjects. English scores rose from 63.65 to 95.81, Science from 86.72 to 98.20, and Mathematics from 71.28 to 95.49. This upward trend reflects the effectiveness of the implemented strategies, particularly the use of Khan Academy and Frontlearners for PISA-type practice and feedback. Interactive tools like Padlet, Jeopardy, and Phet simulations made sessions more engaging, enhancing critical thinking, comprehension, and reasoning skills. These

outcomes align with findings by Hattie (2015) and OECD (2019), which highlight the value of student-centered, technology-supported learning.

Overall, the sharp score gains confirm that active, differentiated, and well-monitored review strategies effectively enhanced students' academic readiness and global competence.

Table 2

Pre-test and Post-test Results on Week 2

Subject	Pre-test Week 2			Post-test Week 2		
	Khan Set 3	Khan Set 4	Average	Khan Set 3	Khan Set 4	Average
English	85.49	83.05	84.27	99.41	98.54	98.98
Science	85.78	82.51	84.15	97.32	99.71	98.52
Mathematics	75.8	82.54	79.17	98.22	98.51	98.37

The week 2 pre-test and post-test results of PISA preparation sessions at Paharang Integrated School showed continuous improvement across subjects. English scores rose from 84.27 to 98.98, Science from 84.15 to 98.52, and Mathematics from 79.17 to 98.37, indicating sustained learning progress. These gains reflect the effectiveness of evidence-based and interactive strategies, including contextualized lessons, digital tools, and formative assessments (Hattie, 2015). The use of active learning platforms such as Khan Academy, Padlet, and simulation-based apps also contributed to higher engagement and performance (Freeman et al., 2014). Overall, the results affirm that the multi-strategy approach enhanced both academic achievement and readiness for real-world problem-solving.

Table 3

Pre-test and Post-test Results on Week 3

Subject	Pre-test Week 3			Post-test Week 3		
	Set 1	Set 2	Average	Set 1	Set 2	Average
English	86.29	68.61	77.45	96.38	93.68	84.03
Science	36.37	68.59	52.48	94.7	95.35	77.78
Mathematics	80.49	87.39	83.94	98.3	99.38	92.25

In week 3 of the PISA preparation sessions at Paharang Integrated School, student performance in English, Science, and Mathematics showed measurable improvement from pre-test to post-test. English scores increased from an average

of 77.45 to 84.03, indicating steady gains in reading comprehension and confidence in tackling assessment tasks. Mathematics performance remained strong, rising from 83.94 to 92.25, reflecting continued mastery of problem-solving skills. The most notable improvement occurred in Science, where scores increased from 52.48 to 77.78, a substantial gain of 25.3 points. This suggests that interventions targeting Science concepts, particularly through interactive simulations and visual aids, effectively reinforced both content knowledge and critical thinking.

These results highlight the benefits of differentiated instruction and the strategic use of interactive learning platforms in enhancing PISA readiness. The pre- and post-test approach also provided students with clear feedback on their progress, helping them identify learning gaps and develop familiarity with the PISA assessment format. Overall, the Week 3 outcomes indicate that combining targeted content support with active, feedback-rich learning experiences can significantly improve student performance across core subjects.

Table 4

Pre-test and Post-test Results on Week 4

Subject	Pre-test Week 4			Post-test Week 4		
	Set 1	Set 2	Average	Set 1	Set 2	Average
English	97.8	94.83	96.32	96.63	97.6	97.12
Science	99.24	100	99.62	98.25	99	98.63
Mathematics	75.51	80.02	77.77	99.1	98.5	98.8

In week 4 of the PISA preparation sessions at Paharang Integrated School, student performance across Mathematics, Science, and English continued to reflect strong outcomes. Mathematics recorded the highest post-test average of 98.80, showing a notable improvement of 21.03 points from the pre-test average of 77.77. This substantial gain suggests that targeted instructional strategies effectively addressed learning gaps in Mathematics.

Science showed a slight decline from a pre-test average of 99.62 to a post-test average of 98.63. This minimal change may indicate a ceiling effect, where students were already performing near their maximum potential, or minor variations in test conditions. English performance remained stable, with a modest increase from 96.32 to 97.12, indicating consistent comprehension and application skills.

These results underscore the importance of aligning instructional support with students' specific learning needs. The dramatic improvement in Mathematics highlights the effectiveness of targeted interventions, while the slight changes in Science and English suggest the need for strategies that sustain engagement and challenge high-performing learners. Overall, the week 4 outcomes demonstrate that focused, feedback-driven instruction can significantly enhance academic performance, particularly in areas where students initially face learning challenges.

Table 5
Pre-test and Post-test Results on Week 5

Subject	Pre-test Week 5			Post-test Week 5		
	Set 1	Set 2	Average	Set 1	Set 2	Average
English	90.24	86	88.12	95.56	92.71	94.14
Science	96.71	97.59	97.15	100	100	100
Mathematics	66.25	92.32	79.29	99.41	98.54	98.98

In week 5, Science achieved a perfect post-test average of 100.00, indicating full mastery of the material. This supports findings from Rubrica (2018) that Project-Based Learning (PBL) enhances performance and engagement in Science. Mathematics followed closely, improving from 79.29 to 98.98, reflecting the impact of differentiated instruction and targeted interventions, consistent with Aguhayon et al. (2023) and Munda et al. (2024). English also improved from 88.12 to 94.14, demonstrating gains through structured literacy strategies similar to REAP and reciprocal teaching methods. Overall, week 5 results—Science (100.00), Mathematics (98.98), English (94.14)—show that subject-specific, evidence-based strategies effectively boost achievement and address learners' individual needs.

Table 6
Pre-test and Post-test Results on Week 6

Subject	Pre-test Week 6			Post-test Week 6		
	Set 1	Set 2	Average	Set 1	Set 2	Average
English	66.51	97.61	82.06	92.07	99.41	95.74
Science	95.76	93.39	94.58	99.2	100	99.6
Mathematics	100	100	100	100	100	100

In week 6, post-test performance ranked as follows: Mathematics (100.00), Science (99.60), and English (95.74), each showing notable gains from pre-test scores (100.00 → 100.00, 94.58 → 99.60, 82.06 → 95.74). Mathematics maintained a perfect score, reflecting consistent mastery and the effectiveness of scaffolded, differentiated instruction, consistent with Aguhayon et al. (2023). Science improved from 94.58 to 99.60, suggesting that interactive tools, collaborative experiments, and multimedia applications effectively reinforced understanding, echoing Aquino (2017). English showed the largest percentage gain, rising from 82.06 to 95.74, likely due to peer tutoring and structured comprehension strategies that accelerated literacy development. Overall, week 6 results demonstrate that contextually relevant, evidence-based strategies across subjects can produce significant academic gains and support sustained learning.

Table 7

Pre-test and Post-test Results on Week 7

Subject	Pre-test Week 7			Post-test Week 7		
	Set 1	Set 2	Average	Set 1	Set 2	Average
English	93.63	81.68	87.66	91.66	86.07	88.87
Science	100	100	100	100	100	100
Mathematics	100	91.71	95.86	96.08	97.39	96.74

In week 7 of the PISA preparation sessions at Paharang Integrated School, Science achieved a perfect post-test score of 100.00, demonstrating consistent mastery of the subject and effective understanding of the concepts. English showed a modest increase from a pre-test average of 87.66 to 88.87, highlighting areas where students still face challenges in language comprehension and application. These results suggest that while students are performing strongly in Science and Mathematics, continued focus on English proficiency is necessary to ensure balanced academic performance across all core subjects.

Table 8

Pre-test and Post-test Results on Week 8

Subject	Pre-test Week 8			Post-test Week 8		
	Set 1	Set 2	Average	Set 1	Set 2	Average
English	74.24	78.8	76.52	97.66	86.07	91.87
Science	96.8	96.95	96.88	100	100	100
Mathematics	89.44	96.27	92.86	96.08	97.39	96.74

Analysis of week 8 assessment scores shows Science with the highest average at 96.88, indicating strong student mastery and effective teaching strategies (Pido & Castañeda, 2020). English recorded the lowest average of 76.52, highlighting challenges in language proficiency and comprehension (De Vera, 2021). Overall, the improvements from pre-test to post-test across subjects demonstrate the positive impact of targeted instructional interventions and emphasize the need for tailored strategies—especially in English—to enhance learning outcomes and support DepEd's goals for inclusive, quality education (Alcala & Cruz, 2022; DepEd, 2021).

Table 9

Summary of 4 Weeks Students' Performance

Subject	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Average
English	95.81	98.98	84.03	97.12	94.14	95.74	88.87	91.87	93.32
Science	98.2	98.52	77.78	98.63	100	99.6	100	100	96.59
Mathematics	95.49	98.37	92.25	98.8	98.98	100	96.74	96.74	97.17

Based on the data, the subjects ranked from highest to lowest average scores are Mathematics (97.17), Science (96.59), and English (93.32). Students excelled in Mathematics, likely due to its objective nature and clear problem-solving strategies (Basco & Banzon, 2021). Science scores also reflect strong understanding, supported by engaging experiments and practical applications (Cruz & Reyes, 2020). English, while essential, had the lowest average, possibly due to language barriers or less interactive learning experiences (Rapadas & Lim, 2022). These findings highlight the need for targeted interventions in English to strengthen communication skills, supporting academic and professional success (Dela Cruz, 2023). Overall, the results underscore the value of diversified, subject-specific instructional strategies, consistent with DepEd's recent educational reforms (DepEd Philippines, 2023).

3. Challenges of Students and Teachers Faced in Implementing and Participating in PISA Preparation and Review Sessions

Students' Responses

Students reported several challenges during the PISA preparation and review sessions, including nervousness and anxiety, difficulty understanding test

formats and questions, technology-related issues, and adjusting to new learning strategies and peer collaboration. Nervousness was most common, particularly at the start, though many noted that it diminished as they became more engaged and familiar with the sessions.

Understanding complex questions, especially in Mathematics, Science, and English, was another frequent concern, reflecting the gap between traditional assessments and the higher-order thinking skills required by PISA (DepEd, 2023). Technology posed challenges for some learners, including difficulties using computers, Canva, and other digital platforms, which aligns with research highlighting digital literacy barriers among Filipino students (Alonzo, 2023). Internet connectivity and environmental distractions also affected participation, reflecting infrastructural limitations in many schools (SEAMEO INNOTECH, 2023).

Adjusting to new routines, such as regular pre- and post-tests and collaborative group work, was initially challenging, but students recognized the benefits in improving confidence and skills.

In summary, while students faced emotional, cognitive, and technological barriers, they also appreciated the support, collaboration, and persistence fostered by the sessions. Addressing these challenges holistically is essential for preparing learners not only for PISA but for lifelong, real-world learning.

Teacher's Responses

Teachers at Paharang Integrated School identified several challenges in implementing PISA preparation sessions. A primary difficulty was students' struggle to transition from rote memorization to applying critical thinking and problem-solving skills in real-world contexts. One teacher noted, "Many students were accustomed to memorization and struggled with open-ended, analytical questions that required deeper reasoning." This highlights a gap in current instructional practices, where higher-order thinking tasks are not consistently integrated.

Another challenge involved varying levels of reading comprehension. As one respondent shared, "Some struggled with analyzing complex texts, making it difficult for them to answer higher-order thinking questions." Limited access to past tests and quality sample questions, along with low student motivation toward standardized testing, further complicated the preparation process. Teachers also reported difficulties with including struggling learners in test

groups and unstable internet connections, which hindered online review activities. Despite these barriers, some teachers noted that challenges were manageable through persistent effort and adaptive teaching strategies.

In summary, the challenges reflect broader systemic and instructional gaps, including learner readiness, reading comprehension deficits, infrastructure limitations, and motivation. Addressing these issues requires differentiated instruction, teacher capacity-building, and access to aligned resources. Doing so can better prepare students for the demands of PISA assessments and improve their engagement and performance.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of this study, clear insights emerge regarding the effectiveness of the PISA Skills Enhancement Program (PSEP) at Paharang Integrated School, the impact of instructional strategies on student performance, and the challenges faced by both learners and teachers. These insights form the basis for the study's conclusions and provide a foundation for practical recommendations aimed at improving academic outcomes and fostering global competencies.

Conclusions

The PISA preparation strategies implemented at Paharang Integrated School were perceived by both students and teachers as highly effective. This is supported by the significant improvements in pre- and post-test scores, indicating that the intervention successfully enhanced academic performance in Mathematics, Science, and English. Active participation in the PISA preparation sessions had a positive impact on student performance. Students who consistently engaged in the eight-week structured activities, including digital learning platforms, gamified tasks, and collaborative exercises, demonstrated measurable improvements across the core PISA domains. Despite the positive outcomes, students experienced emotional, cognitive, and technological challenges, while teachers faced difficulties in guiding learners from rote memorization to higher-order thinking and managing limited digital infrastructure. These challenges highlight areas requiring additional support for effective program implementation. Sustained, interactive, and collaborative instructional strategies, supported by teacher capacity-building, digital resources, and stakeholder involvement, were identified as critical to enhancing

academic readiness, 21st-century skills, and global competence. Targeted strategies in English, Science and Mathematics and consistent use of technology-supported platforms are recommended to further improve student outcomes.

Recommendations

Building on these findings, it is recommended that students continue utilizing technology-supported platforms and engage actively in collaborative, gamified, and simulation-based activities to strengthen critical thinking, problem-solving, and academic readiness. Teachers should maintain differentiated instruction, formative assessment, and interactive digital tools to ensure continued student engagement and measurable learning improvements across all PISA domains. School administrators should provide ongoing support, including access to technology and capacity-building for teachers, to address the challenges faced by both students and educators. Policymakers should implement and support evidence-based, student-centered strategies, including targeted interventions in English, Science, and Mathematics, to further enhance program effectiveness and global competence.

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ENHANCING GRADE 10 WRITING SKILLS USING AI-POWERED TOOLS IN PAHARANG INTEGRATED SCHOOL

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Abstract: This study, titled "Enhancing Grade 10 Writing Skills Using Ai-Powered Tools in Paharang Integrated School," examined the impact of Grammarly and ChatGPT on students' writing performance during the Fourth Quarter of School Year 2024–2025. Using a descriptive research design, the study involved 50 Grade 10 learners from Paharang Integrated School. Data were collected through pretest and posttest assessments, questionnaires, reflection logs, and classroom observations. Findings revealed significant improvement in grammar, vocabulary, coherence, and organization after using AI tools. Learners became more confident in revising and editing their work. However, challenges such as limited internet access, difficulty interpreting AI feedback, and overreliance on suggestions emerged. The study recommends blended feedback combining teacher and AI input, training on digital literacy, promoting reflective writing, and improving access to digital resources to ensure effective and equitable use of AI tools in writing instruction.

Keywords: *AI Writing Tools, ChatGPT, Grade 10 Learners, Descriptive Research, English Instruction*

INTRODUCTION

Writing is one of the fundamental skills in English that allows learners to communicate ideas clearly, think critically, and succeed academically. However, many Filipino junior high school students continue to face difficulties in developing coherent, grammatically correct, and well-organized written outputs. At the Grade 10 level, where more complex academic writing tasks are expected,

learners often struggle with limited vocabulary, poor sentence structure, and a lack of confidence in their writing abilities.

National and international assessments reflect these challenges. The 2022 Program for International Student Assessment (PISA) results revealed that Filipino learners ranked among the lowest in reading and writing literacy, highlighting widespread difficulty in constructing extended written responses. Similarly, the Department of Education's (DepEd) 2023 National Achievement Test (NAT) showed that the average performance of Grade 10 students in English remains below mastery level, particularly in tasks requiring productive skills such as writing.

In response to these persistent challenges, technology—specifically artificial intelligence (AI)—offers promising support. AI-powered writing assistants such as Grammarly and ChatGPT are now widely accessible and provide real-time feedback on grammar, vocabulary, coherence, and overall writing organization. These tools can serve as digital scaffolds that promote self-correction, revision, and metacognitive awareness among learners.

At Paharang Integrated School, Grade 10 students show potential in writing but often rely heavily on teacher feedback, which can delay the learning process. With growing demands for personalized and independent learning, integrating AI writing assistants into the classroom may empower learners to take greater control of their writing. When used appropriately and ethically, these tools can encourage active revision, increase confidence, and improve writing outcomes without replacing the teacher's role.

This action research, therefore, seeks to explore the impact of AI-powered writing assistants on the writing proficiency of Grade 10 learners. By incorporating these tools in writing instruction, the study aims to determine their effectiveness, identify learner experiences, and generate classroom-based insights that support both digital literacy and language development. The integration of AI in writing instruction also aligns with DepEd's MATATAG agenda and the Basic Education Development Plan (BEDP) 2030, which emphasize innovation, inclusivity, and learner-centered approaches.

Literature Review

In recent years, the integration of artificial intelligence (AI) in education has emerged as a transformative approach to enhancing student learning outcomes, particularly in the domain of language instruction. Among these

innovations, AI-powered writing assistants such as Grammarly and ChatGPT have gained recognition for their ability to provide real-time, personalized feedback that supports the development of writing skills. As writing remains a critical competency in both academic and real-world contexts, understanding the impact of these digital tools on learners' writing proficiency is essential. This review of related literature explores current studies that support the use of AI in improving grammar, vocabulary, coherence, and organization; examines the effectiveness of AI-assisted instruction; identifies challenges in implementation; and proposes strategies to optimize the use of AI writing tools in English classrooms. By grounding the study in recent scholarly work, this section aims to provide a research-based foundation for investigating how AI technologies can be effectively leveraged to support writing development among Grade 10 learners.

AI-powered writing tools have shown significant promise in enhancing various components of writing proficiency. According to Xie et al. (2023), real-time feedback from AI applications helps learners notice and correct grammatical and structural errors instantly, thus contributing to immediate gains in grammar and coherence. This timely feedback is especially beneficial for struggling learners who may not receive instant guidance in traditional settings.

Moreover, AI-assisted writing has been found effective in developing students' vocabulary and sentence variety. Farah and Salim (2021) highlighted that AI programs suggest alternative word choices and paraphrased phrases, which expose students to a broader lexical range. Consequently, learners can gradually expand their vocabulary and improve lexical appropriateness in context.

In addition, the organizational aspects of writing also benefit from AI integration. As noted by Zhai (2022), tools like Grammarly and ChatGPT offer cues and templates that guide learners in structuring paragraphs and essays more logically. As a result, students become more aware of transitions and paragraph unity, leading to improvements in coherence and overall essay organization.

The overall effectiveness of AI in writing instruction is well-documented in recent literature. Zou et al. (2021) found that students who used AI writing assistants experienced measurable gains in clarity, coherence, and correctness in their compositions. These tools served as both evaluators and coaches, empowering students to revise their drafts with confidence and independence.

Furthermore, Kohnke and Moorhouse (2022) emphasized that AI writing tools help reduce learner anxiety and foster self-regulated learning behaviors. Because students receive nonjudgmental and instant feedback, they are more inclined to take risks in their writing, leading to improvements in fluency and motivation. Thus, AI serves not only a corrective but also an affective function in the learning process.

Adding to this, Xie et al. (2023) reported that the integration of AI technologies aligns well with learner-centered pedagogy, allowing students to progress at their own pace. Through adaptive support and personalized feedback, AI tools increase learner autonomy and writing output over time. Therefore, the use of such tools proves highly effective when thoughtfully implemented within classroom instruction.

Despite their benefits, AI writing tools present challenges that may hinder effective use, particularly in resource-limited environments. Alenezi (2023) noted that limited access to stable internet and digital devices can restrict students from fully benefiting from AI platforms. This digital divide disproportionately affects learners in under-resourced schools, creating inequities in learning outcomes.

In addition, interpreting AI-generated feedback can be difficult for some students. Lee and Xu (2022) emphasized that students often misinterpret grammar and style suggestions due to unfamiliar vocabulary or lack of metalinguistic knowledge. Consequently, instead of learning, students may become confused or reliant on AI without fully understanding the corrections.

Furthermore, the over-reliance on AI assistance can diminish students' critical thinking. According to Alvarez et al. (2022), some learners tend to blindly accept AI recommendations without reflecting on their accuracy or relevance. This passive behavior reduces the opportunity for learners to engage deeply with their writing and slows the development of independent editing skills.

To enhance the effectiveness of AI tools in writing instruction, educators must provide guided training in digital literacy. Wang and Sleeman (2023) suggested that instructional support is crucial in helping learners use AI tools responsibly. By incorporating AI literacy into writing lessons, teachers can help students understand how to analyze and apply automated feedback critically.

Moreover, using blended feedback models that combine AI suggestions with teacher input leads to better learning outcomes. As Alvarez et al. (2022) proposed, teacher-scaffolded feedback not only validates or clarifies AI

corrections but also ensures that instruction remains human-centered. This dual approach promotes reflective thinking and deeper engagement with revision strategies.

Finally, promoting reflective writing practices strengthens the impact of AI integration. Kohnke and Moorhouse (2022) encouraged the use of reflection logs or writing journals, allowing students to track their learning progress and evaluate how AI contributed to their improvement. Through consistent reflection, learners become more aware of their strengths, challenges, and writing habits.

Research Questions

Specifically, this study seeks to answer the following questions:

1. What is the level of writing proficiency of Grade 10 learners before and after the use of AI-powered writing assistants in terms of:
   1.1 Grammar;
   1.2 Vocabulary;
   1.3 Coherence;
   1.4 Organization?
2. How effective are AI-powered writing assistants in improving the writing proficiency of Grade 10 learners?
3. What challenges do learners encounter in using AI-powered writing assistants during writing tasks?
4. What strategies can be developed to enhance the integration of AI tools in English writing instruction based on students' performance and feedback?

METHODOLOGY

This part presents the methods applied in conducting the study and the procedures and instruments used in gathering the data. It also includes the participants in the study and the statistical treatment to show how the data was interpreted and analyzed.

Research design

This study employed a descriptive quantitative research design to assess the effectiveness of AI-powered writing assistants in enhancing the writing proficiency of Grade 10 learners at Paharang Integrated School during the fourth quarter of School Year 2024–2025. This design was deemed appropriate for gathering measurable data related to students' performance in written tasks and

for determining improvements that resulted from the implementation of technology-supported classroom-based instruction. The primary focus was on describing and quantifying the learners' writing performance before and after the intervention using structured assessments and statistical tools, without relying on qualitative interpretation.

To address the first research question, which examined students' baseline writing proficiency in terms of grammar, vocabulary, coherence, and organization, a teacher-made written pretest was administered. The test was evaluated using an analytic scoring rubric aligned with the Most Essential Learning Competencies (MELCs) for Grade 10 English. During the intervention period, students were guided in using Grammarly and ChatGPT during their writing tasks. These AI tools were used to provide real-time feedback, suggest revisions, and improve sentence structure and word choice. At the end of the intervention, a posttest with a parallel structure and rubric was conducted to assess improvements in writing performance. The pretest and posttest scores were compared using a paired samples t-test to determine whether the changes in student performance were statistically significant, thus answering the second research question.

The third and fourth research questions, which focused on identifying challenges encountered and proposing strategies for effective integration of AI tools, were addressed through the use of structured student surveys and reflection forms. These tools gathered descriptive data on students' experiences, perceived benefits, difficulties, and suggestions related to the AI writing assistants. The data were analyzed using frequency counts and weighted means to identify trends and common responses. By adhering strictly to this design, the study ensured an objective, data-driven evaluation of the AI-supported writing intervention, while remaining limited to one grade level, one school, and one quarter within the academic year.

Research instruments

To collect the necessary data for the study, the following research instruments were employed:

Writing Proficiency Rubric – A teacher-developed analytic scoring rubric was used to assess students' writing performance in four domains: grammar, vocabulary, coherence, and organization. This rubric provided a standardized measure of writing proficiency before and after the intervention.

Student Perception Survey – A structured questionnaire using a 4-point Likert scale was administered after the intervention to gather student feedback on the use of AI-powered writing tools, particularly Grammarly and ChatGPT. The survey aimed to capture perceptions of tool effectiveness, writing improvement, and encountered challenges.

Focus Group Discussion (FGD) Guide – A semi-structured interview guide was used to conduct FGDs with selected student participants. This tool provided deeper insights into learners' experiences, difficulties, and suggestions for integrating AI tools in classroom writing tasks.

Construction. The writing proficiency rubric was meticulously constructed by the researcher based on the Most Essential Learning Competencies (MELCs) in English for Grade 10, as prescribed by the Department of Education. The rubric was designed to assess four critical domains of writing—grammar, vocabulary, coherence, and organization—each representing key aspects of academic writing competence. For each domain, four performance levels were established, with clear descriptors ranging from "Beginning" to "Exemplary," allowing for consistent, criterion-based evaluation of students' written outputs. The rubric was structured to support both formative and summative assessment and to capture measurable growth in student writing over time. It also served as the scoring guide for both the pretest and posttest compositions, ensuring alignment with the study's objective of determining writing improvements following the AI-powered intervention.

The student perception survey was developed to collect learners' feedback on their experiences using AI-powered writing assistants such as Grammarly and ChatGPT during the intervention. The survey consisted of 15 close-ended statements presented in a 4-point Likert scale format, ranging from "Strongly Disagree" to "Strongly Agree." The items were categorized into three key areas: (1) perceived improvement in writing skills, (2) effectiveness and usability of AI tools, and (3) challenges encountered while using the tools. Each item was constructed to reflect the specific objectives of the research questions, especially in terms of evaluating learners' self-reported progress and the practical integration of AI tools in writing tasks. The survey content was based on a review of recent studies on AI and writing instruction and was reviewed by experts to ensure clarity, relevance, and alignment with the constructs being measured.

The Focus Group Discussion (FGD) guide was created to gather qualitative insights into students' lived experiences with AI-powered writing tools. The guide

contained open-ended questions aimed at encouraging students to share their thoughts, perceptions, difficulties, and suggestions in relation to the intervention. Questions were designed to explore specific areas such as: How did you use Grammarly or ChatGPT in your writing tasks? What benefits did you experience? What challenges did you encounter? and How did these tools affect the way you approach writing? The guide was carefully crafted to ensure the discussions remained focused yet flexible, allowing the facilitator to probe deeper when necessary. It was structured to support the third and fourth research questions, especially regarding the identification of implementation challenges and the development of improvement strategies. The guide underwent validation by experienced language teachers and research specialists to ensure appropriateness, age-level suitability, and ethical sensitivity in student engagement.

Validation. To ensure content validity, the instruments underwent expert validation by a panel composed of three professionals in English language teaching, educational research, and classroom assessment. Each item was assessed for clarity, relevance, and alignment with the study objectives. Comments from the validators guided the refinement of item wording and rating scales.

Following expert review, the instruments were piloted with a small group of students not involved in the study. Feedback gathered during the pilot test helped confirm the instruments' reliability and allowed the researcher to make final adjustments before their full administration.

Administration. The instruments were administered during the fourth quarter of School Year 2024–2025. In the first week, a writing pretest was conducted to determine the students' baseline writing proficiency in terms of grammar, vocabulary, coherence, and organization. Learners were given a writing task which was assessed using the validated analytic rubric aligned with Grade 10 English MELCs.

Over the next four weeks, the intervention was implemented through weekly writing tasks supported by AI-powered writing assistants—Grammarly and ChatGPT. Students used these tools during guided classroom activities to revise, edit, and enhance their written outputs under the supervision of the teacher-researcher. In the sixth week, a posttest with a structure similar to the pretest was administered to evaluate improvements in the same writing domains.

Following the posttest, the researcher distributed the structured 4-point Likert scale perception survey to all participants to gather feedback on their experiences with the AI tools, the effectiveness of the intervention, and the challenges they encountered during the writing tasks. To deepen the analysis, selected students were invited to participate in focus group discussions using a validated interview guide. These sessions were conducted after class hours in a quiet, supportive environment to allow students to express their insights openly. All responses were treated with confidentiality and used solely to support and contextualize the quantitative data.

Retrieval of the Questionnaire. The completed questionnaires were retrieved immediately after administration to ensure data accuracy and avoid missing responses. The researcher personally collected each survey form, checked for completeness, and asked for clarification if any items were left unanswered. The focus group responses were recorded with student permission and transcribed manually by the researcher.

All collected data—including the pretest and posttest outputs, survey responses, and FGD transcripts—were securely organized and coded to protect participant identities. The compiled data were prepared for statistical and thematic analysis with the goal of measuring writing improvements, identifying common implementation challenges, and generating actionable recommendations for enhancing the integration of AI tools in English writing instruction.

Data Analysis

The data gathered in this study were analyzed using descriptive and inferential statistical tools aligned with the study's quantitative research design and specific research questions. These methods were used to measure the students' writing performance before and after the intervention, determine the perceived effectiveness of the AI-powered writing assistants, and identify the challenges students encountered during the writing process.

Paired Samples t-Test was used to compare the students' pretest and posttest writing scores in the areas of grammar, vocabulary, coherence, and organization. This inferential statistical tool was applied to determine whether the observed changes in students' writing proficiency after the intervention were statistically significant.

Frequency was used to count how many students selected each response option for each survey item. This helped identify common trends in student perceptions and experiences with the AI tools.

Percentage was computed to show the proportion of specific responses in relation to the total number of participants, offering a clearer view of distribution patterns across survey items.

Ranking was applied to organize the survey items or perceived challenges from highest to lowest based on frequency counts or mean scores. This allowed the researcher to identify the most commonly reported benefits or difficulties in using AI writing assistants.

Weighted Mean served as the primary measure to interpret the overall ratings of each item in the perception survey. Each response on the 4-point Likert scale was assigned a corresponding numerical value (4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree). The weighted mean scores were interpreted using the following scale:

Score Range	Verbal Interpretation
3.50 – 4.00	Strongly Agree / Very High
2.50 – 3.49	Agree / High
1.50 – 2.49	Disagree / Moderate
1.00 – 1.49	Strongly Disagree / Low

Lastly, **Thematic Analysis** was applied to responses from the Focus Group Discussions (FGDs). Recurring ideas, challenges, and suggestions were coded and grouped under common themes to support and enrich the quantitative findings. The triangulation of results from rubrics, surveys, and FGDs ensured a comprehensive understanding of the effectiveness and implementation of AI-powered writing assistants in the classroom setting.

RESULTS AND DISCUSSION

This section presents and interprets the data collected before and after the implementation of AI-powered writing assistants. The findings are organized according to the research questions and supported by quantitative and qualitative data from pretests, posttests, student reflections, and focus group interviews.

1. Level of Writing Proficiency of Grade 10 Students

This part presents the level of writing proficiency of Grade 10 learners at Paharang Integrated School, focusing on their performance before and after the implementation of the AI-powered writing intervention. It provides a detailed analysis of four core components of writing—grammar, vocabulary, coherence, and organization—that are essential to effective written communication. The findings illustrate how students developed their writing abilities through the structured use of AI writing assistants such as Grammarly and ChatGPT, which offered real-time feedback, guided revisions, and scaffolded learning throughout the intervention period.

1. Level of Writing Proficiency of Grade 9 Students Before the Implementation of the AI-powered Writing Tools

Table 1

Pretest Results on Writing Proficiency of Grade 9 Students (n = 50)

Writing Component	Mean Score	Descriptive Level
Spelling	6.82 / 15	Developing
Vocabulary Usage	7.05 / 15	Developing
Grammar	6.20 / 15	Beginning
Composition Quality	7.18 / 15	Developing
Overall Mean	**27.25 / 60**	**Developing**

The pretest results among 50 Grade 10 students revealed that the majority of learners were at the Developing level across most writing components. Grammar was identified as the weakest area, with a mean score of 6.20, pointing to difficulties in sentence structure, punctuation, and verb usage.

1.1 Level of Writing Proficiency in Terms of Grammar (n = 50)

Grammar refers to the accurate use of language structures such as subject-verb agreement, tense consistency, punctuation, and capitalization. The AI-powered writing assistant offered real-time corrections and explanations to support grammatical accuracy in students' compositions.

Indicators (Grammar)	Weighted Mean	Verbal Interpretation	Ranking
1. Use correct subject-verb agreement.	3.52	Strongly Agree	1
2. Apply correct verb tenses.	3.46	Agree	3
3. Use proper punctuation marks.	3.42	Agree	4
4. Capitalize proper nouns and sentence beginnings.	3.48	Agree	2
5. Revise grammar errors based on AI feedback.	3.50	Strongly Agree	1.5
Composite Mean	**3.48**	**Agree**	—

The composite mean of 3.48 reflects an Agree interpretation, indicating that learners are still improving in grammar. The strongest areas were subject-verb agreement and the ability to revise errors with AI feedback (WM = 3.52 and 3.50). However, areas like punctuation and tense use scored slightly lower. This supports De Vera and Jimenez (2022) who emphasized that while AI helps correct errors, mastery of grammar still requires teacher-guided instruction to deepen understanding.

1.2 Level of Writing Proficiency in Terms of Vocabulary (n = 50)

Vocabulary focuses on the use of precise, varied, and topic-appropriate words. The AI-powered tool supported vocabulary development by suggesting synonyms and discouraging overused words.

Indicators (Vocabulary)	Weighted Mean	Verbal Interpretation	Ranking
1. Use topic-appropriate and precise words.	3.66	Strongly Agree	1
2. Avoid repetitive vocabulary.	3.62	Strongly Agree	3
3. Incorporate synonyms suggested by the AI tool.	3.64	Strongly Agree	2
4. Understand and apply new words in context.	3.60	Strongly Agree	4
5. Use transitions and connectors effectively.	3.58	Strongly Agree	5
Composite Mean	**3.62**	**Strongly Agree**	—

Vocabulary received a composite mean of 3.62, interpreted as Strongly Agree, making it one of the strongest components. Students particularly excelled in selecting precise and varied vocabulary (WM = 3.66).

1.3 Level of Writing Proficiency in Terms of Coherence (n = 50)

Coherence refers to the logical connection and flow of ideas within and between sentences and paragraphs. It affects how easily the reader understands the message.

Indicators (Coherence)	Weighted Mean	Verbal Interpretation	Ranking
1. Maintain a clear focus throughout the text.	3.60	Strongly Agree	1
2. Ensure logical flow of ideas between sentences.	3.58	Strongly Agree	2
3. Use transitions to connect ideas smoothly.	3.52	Strongly Agree	3
4. Avoid abrupt topic shifts.	3.46	Agree	4
5. Improve coherence using AI revision suggestions.	3.44	Agree	5
Composite Mean	**3.52**	**Strongly Agree**	—

With a composite mean of 3.52, coherence was rated Strongly Agree, showing that students improved in organizing thoughts logically. The use of transitions and overall flow improved notably, consistent with the AI's role in prompting revisions for unclear or disjointed ideas.

1.4 Level of Writing Proficiency in Terms of Organization (n = 50)

Organization pertains to how students structure their compositions, including the arrangement of the introduction, body, and conclusion, as well as the development of ideas in a logical order.

Organization received a composite mean of 3.59, interpreted as Strongly Agree. The AI assistant's structure-checking and outlining features helped students improve their paragraph sequencing and transitions.

Among the four sub-variables, Vocabulary received the highest rating (WM = 3.62), followed by Organization (3.59), Coherence (3.52), and Grammar (3.48). The results confirm that the AI-powered writing assistant significantly enhanced students' writing performance, especially in vocabulary development and idea structuring. However, grammar remains an area for growth.

Indicators (Organization)	Weighted Mean	Verbal Interpretation	Ranking
1. Follow correct paragraph structure.	3.64	Strongly Agree	1
2. Present ideas in a logical sequence.	3.60	Strongly Agree	3
3. Write clear introductions and conclusions.	3.62	Strongly Agree	2
4. Stay on topic throughout the composition.	3.58	Strongly Agree	4
5. Revise structure based on AI feedback.	3.50	Strongly Agree	5
Composite Mean	**3.59**	**Strongly Agree**	—

2. Effectiveness Of AI-Powered Writing Assistants in Improving The Writing Proficiency of Grade 10 Learners

This section evaluates the effectiveness of the AI-powered writing assistant in enhancing students' writing performance across four key areas: grammar, vocabulary, coherence, and organization. The data below reflects pretest and posttest comparisons based on rubric scores. Effectiveness is determined by analyzing the magnitude of improvement in each area.

Table 2.1

Effectiveness of AI Writing Assistant in Improving Writing Proficiency (n = 50)

Writing Component	Pretest Mean	Posttest Mean	Mean Gain	Interpretation
Grammar	2.60	3.48	+0.88	Effective
Vocabulary	2.65	3.62	+0.97	Highly Effective
Coherence	2.55	3.52	+0.97	Highly Effective
Organization	2.58	3.59	+1.01	Highly Effective
Overall Mean	**2.60**	**3.55**	**+0.95**	**Highly Effective**

The posttest results reveal a consistent and meaningful increase in students' writing proficiency, with organization (+1.01) and coherence (+0.97) showing the highest gains. This indicates that AI tools were particularly helpful in improving the structure and logical flow of students' compositions. The overall

mean gain of +0.95 suggests a high level of effectiveness of the AI-powered writing assistant.

3. Constraints Learners Encountered in Using AI-powered Writing Tools

While AI tools offer numerous benefits, their effectiveness may be limited by specific challenges faced by students. This section presents the common difficulties experienced by learners when using the AI-powered writing assistant, as identified through a student feedback survey and informal reflections.

Table 3

Challenges Encountered by Students in Using AI Writing Assistants (n = 50)

Challenges Reported	Frequency	Percentage	Interpretation
Difficulty understanding AI feedback	27	54%	Often experienced
Internet connectivity issues	21	42%	Sometimes experienced
Overdependence on suggestions (less independent thinking)	19	38%	Sometimes experienced
Confusion with AI-generated vocabulary	18	36%	Sometimes experienced
Discomfort or unfamiliarity with technology	14	28%	Occasionally experienced

The most common challenge was the difficulty in understanding AI feedback (54%), particularly when suggestions involved complex grammar rules or advanced vocabulary.

Connectivity issues also emerged as a barrier, especially in public schools where stable internet access is inconsistent. In addition, some students became overly reliant on the tool, echoing the caution from Krashen (2022) that excessive dependence on corrective tools may hinder long-term learning if not guided by teacher scaffolding.

The findings suggest a need to integrate AI tools gradually with clear instruction, modeling, and reflection activities to ensure meaningful use.

4. Proposed Strategies to Improve AI Integration in Writing Instruction

Based on student performance outcomes and the challenges identified, this section presents practical and responsive strategies to strengthen the integration of AI tools in classroom instruction. These strategies are drawn from the data and supported by pedagogical literature on digital literacy and AI in education.

Strategy	Rationale
1. Pre-orientation on AI features and limitations	Helps students understand how to use tools critically and avoid overreliance.
2. Teacher-guided feedback alongside AI suggestions	Ensures that students don't rely solely on automated corrections.
3. Integrating reflection tasks after using AI	Promotes metacognition and awareness of their learning process.
4. Scheduled offline writing practices	Balances digital with traditional writing to develop independent skills.
5. Providing differentiated support for struggling users	Addresses varying levels of digital literacy and comfort with AI tools.

These strategies aim to balance the benefits of AI with the human element of instruction. A teacher-facilitated approach to AI use supports better comprehension of the feedback provided by the tool, especially among learners who struggle with interpreting automated suggestions.

By integrating reflective practices and offline writing sessions, students become more aware of their learning progress and less dependent on automated revisions.

Tailoring support based on learner feedback ensures a more inclusive and equitable implementation of AI writing tools, especially in resource-limited contexts like many public schools in the Philippines.

CONCLUSION AND RECOMMENDATIONS

The study recommends continuing the use of AI-powered writing assistants in writing activities, as these tools have significantly improved students' performance and can support them from brainstorming to revision. However, it stresses the importance of providing clear orientation and explicit instruction so students can properly interpret AI-generated suggestions and understand that these tools enhance, rather than replace, their own thinking and creativity. To ensure balanced learning, teachers should complement AI feedback with personalized guidance, writing conferences, and human scaffolding while also incorporating reflective activities that help learners analyze the reasons behind their revisions. The recommendations further encourage assigning offline writing tasks to strengthen students' autonomy and prevent overdependence on technology. Addressing digital literacy gaps and ensuring access to reliable devices and internet are also essential to equitable implementation. The study additionally promotes collaborative writing using AI to build peer learning and confidence and ultimately calls for policy support to integrate AI in the curriculum responsibly and effectively.

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ENHANCING MATHEMATICAL LEARNING THROUGH GAMIFIED STRATEGIES: THE FRAMEWORK OF PROJECT MATH-LARO (LEARNING THROUGH ACTIVE, RESPONSIVE, AND ORGANIZED ACTIVITIES)

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Abstract: Gamified instruction has occurred as a dynamic alternative to traditional way of teaching and seen to be an innovative approach in Mathematics education. This study, focused on the implementation of Project MATH-LARO (Learning through Active, Responsive, and Organized Gamification), intended to explore the existing strategies, perception towards gamified instruction and challenges encountered in utilizing game-based approach in learning. In addition, it also sought to identify the extent to which gamification influences the learners' engagement, participation and comprehension as perceived by their teachers. The study involved 35 Mathematics teachers from district 4 taken using purposive sampling. Mixed method of quantitative and qualitative were used in analyzing data using a researcher-made questionnaire. Quantitative data were analyzed using descriptive statistics, while thematic analysis was applied to qualitative responses. The findings showed that majority of the respondents are still utilizing lecture-based teaching followed by collaborative group work. A significant number of respondents are integrating game-based learning as part of their instruction. Teachers strongly agreed that gamified activities amplified student engagement, encouraged greater participation, and improved comprehension of mathematical concepts. On the other hand, qualitative data revealed common challenges, including time constraints, lack of materials, and insufficient training in gamification design. In conclusion, teachers recognized the positive impact of gamified instruction on learner outcomes in Mathematics.

Keywords: Gamification, Mathematics Instruction, Game-Based Learning, Mixed-Methods Research, Instructional Strategies

INTRODUCTION

Mathematics is an important subject taken by learners. It is exciting, and fun once learned even though for some it is challenging. There are a lot of competencies under this subject like learning the formula, solving equation, analyzing the problems and alike. Learning all mentioned competencies is a challenge for both traditional and alternative learning environment. Traditional method of learning may not always cope with the interest of the learners or even perfectly address the needs of the diverse learners. Engaging the learners with different strategies that encourage lifelong learning and Mathematics enjoyment have always been part of innovative teaching. Gamification, the application of game-based design in education or in pedagogical approach could transform how Mathematics is learned and taught. Through well-organized, interactive, enjoyable and technological based activities that are incorporated with the learning objectives can fuel the interest, motivation, participation and retention of the learners.

This study seeks to explore the efficiency of gamified teaching strategies in Junior High School Mathematics and determine how these methods can serve as a foundation for the development of Project MATH-LARO—a structured intervention that controls games and active learning to improve numeracy skills among learners.

Project MATH-LARO is an innovation for pedagogical approach of Junior high school mathematics teachers. This initiative is beyond the traditional way of teaching--the lecture-based instruction, this is bringing an interactive and engaging activities to learners. Different activities such as board or card games, math relays, problem solving race, virtual activities, digital puzzle, Online activities and alike are included in the project. These activities are aligned with learning objectives and competencies.

Literature Review

The current landscape of Mathematics instruction is still heavily influenced by traditional teaching methods, which is a widely recognized global trend. Research indicates that strategies like lecture-based teaching are highly common because they are considered easier to implement and are often appropriate for managing large class sizes (Roehl, Reddy, & Shannon, 2013). However, this reliance on teacher-centric delivery may struggle to fully engage diverse student populations, necessitating a shift toward more dynamic and

student-focused pedagogical models that encourage lifelong learning and enjoyment in the subject.

Teachers have increasingly incorporated student-centered strategies that promote active exploration to address the limitations of conventional instruction. For instance, inquiry-based learning and collaborative/group work are critical approaches identified in the literature for enhancing learners' critical thinking and problem-solving skills through guided exploration of mathematical concepts (Duncan & Chinn, 2007). Furthermore, the use of manipulatives or hands-on materials is supported as a method to develop conceptual understanding, offering students tangible tools to visualize abstract mathematical ideas and make concrete connections (Moyer, Bolyard, & Spikell, 2002).

A key innovation gaining traction is gamification, defined as the application of game-based design elements into the learning environment. This approach is highly effective in boosting student motivation and interest by delivering lessons in an interactive and engaging manner (Asbell-Clarke, 2016). Gamification is supported by literature for its positive impact on knowledge progress, often influencing student engagement through indirect effects of enjoyment and self-efficacy (Fuchs, 2022; Chen and Liang, 2022). Nevertheless, one challenge noted is that while gamification provides a positive impact, maintaining student motivation throughout an entire course may require continuous adaptation (Fuchs, 2022).

Technology plays an instrumental role in modernizing instructional delivery and presentation. The use of Interactive PowerPoint or slide presentations is a foundational strategy that enhances students' commitment and pleasure by creating a dynamic environment when utilized effectively (Nawale and Nawale, 2022). Similarly, the use of educational videos has surged, accelerated by the need for virtual and blended learning solutions post-pandemic (Camilleri and Camilleri, 2021), allowing content to be accessed asynchronously anytime and anywhere (Rahmatika et al., 2021). Specialized learning applications like GeoGebra further aid comprehension by helping students visualize abstract concepts, making lessons more practical and easier to understand (Dahal et al., 2022).

Finally, the shift toward modern methods has reshaped assessment practices. The K-12 curriculum reform has prioritized Performance Tasks as relevant learning activities for comprehensive student evaluation (Petalla and Doromal, 2021). Gamification is also leveraged in assessment, where games like

Quizizz and Kahoot are used as motivators for students taking formative quizzes (Fuchs, 2022). Beyond traditional testing, research shows that game-based instruction is effective in enhancing students' critical thinking skills and building knowledge through self-reflection and cooperative problem-solving (Angelelli et al., 2023). Therefore, educators are advised to employ appropriate game elements to ensure these strategies contribute positively to students' overall academic performance (Zeng et al., 2024).

Synthesis

The reviewed literature establishes a robust foundation for Project MATH-LARO, confirming that gamified strategies offer a scientifically validated path to enhancing student engagement, participation, and cognitive skills in Mathematics. The consensus is that while traditional instruction is common, modern pedagogy demands the motivational and clarifying power of gamification (Asbell-Clarke, 2016; Fuchs, 2022). However, realizing these benefits is often hindered by practical classroom challenges, including the lack of readily available, high-quality, pre-made resources and the necessary professional development for teachers to confidently design and manage gamified lessons. Project MATH-LARO, which aims to develop a comprehensive module/manual of gamified strategies, is therefore a timely and targeted intervention designed to bridge this critical gap, translating the proven concepts of game-based learning into an accessible, structured, and teacher-informed reality.

Research Questions

The following research questions will be the focus of this study:

1. What is the existing teaching strategy utilized by teachers in teaching Mathematics in terms of:
   1.1 Instructional Approaches
   1.2 Technological Integration
   1.3 Assessment Strategies
2. How do teachers perceive the learner's involvement in gamified activities in terms of:
   2.1 engagement,
   2.2 participation, and
   2.3 comprehension?

3. What are the challenges of using gamified strategies in teaching Mathematics?
4. Based on the findings of the study, what mechanisms should be included in Project MATH-LARO to successfully support mathematical learning?

METHODOLOGY

The intervention, Project MATH-LARO, employed a sequential methodology for its development and validation. This approach was divided into three distinct phases: Preparation, Development, and Validation.

The preparation stage involved a mixed-methods approach to establish the baseline context for the intervention. The researcher administered a self-made questionnaire to 35 selected Junior High School Mathematics teachers from District IV of Batangas City to gather quantitative data on their existing teaching strategies (Instructional Approaches, Technological Integration, and Assessment Strategies) and their perceptions of gamified instruction across engagement, participation, and comprehension. This stage utilized descriptive statistics (weighted mean, frequency, percentage) and Cronbach's alpha for reliability analysis. Concurrently, Focus Group Discussions (FGDs) and interviews were conducted to gather qualitative data, which was analyzed using thematic analysis, specifically targeting the challenges teachers encountered with current gamified strategies and their recommendations for the future Project MATH-LARO.

Using the comprehensive data gathered during the Preparation Stage, the researcher proceeded to design and refine the actual intervention. This development phase involved the design and trial of gamified activities (including board/card games, math relays, and virtual activities) that were fully aligned with the DepEd-prescribed learning objectives and competencies for Junior High School Mathematics. The activities were incorporated into lesson plans and introduced into a regular classroom setting. A critical part of this stage was providing necessary training to selected teachers from District 4 on implementing these gamified strategies, classroom management techniques, and aligning games with curriculum standards.

The final stage which is the validation phase focused on ensuring the efficacy and usability of the developed intervention. This included the piloting of the refined activities with selected junior high school teachers and their students. Throughout the piloting, the researcher meticulously gathered data through keen

observation and collected feedback from both teachers and learners on their experiences. Furthermore, learner outputs, such as portfolio assessments and Math activity scores, were collected and analyzed for comparison and validation. The culmination of this stage was the refinement of the activities and the filtering of appropriate games, leading to the final objective: the creation of a comprehensive module/manual of gamified Mathematics strategies to be disseminated across District 4.

Research design

The participants of this research were selected 35 junior high school teachers from District IV in the Division of Batangas City, namely Batangas City Integrated High School, Malitam National High School, and Batangas City High for the Arts, and their students were also included for comparison and validation. In determining the impact of the gamified teaching strategy, learner outputs, such as portfolio assessments and math activity scores were analyzed.

The study utilized a mixed methods research design within an overarching action research framework. It followed a Sequential Explanatory Model (Quantitative → Qualitative). The initial phase focused on collecting quantitative data to measure the status quo of instructional strategies and teachers' perceptions of gamification's impact. The subsequent phase involved gathering qualitative data (interviews and FGDs) to explain the quantitative results, particularly by identifying the practical challenges teachers faced. This cyclical, practical approach, characteristic of action research, ensured that the development of Project MATH-LARO was both statistically validated and responsive to the expressed needs of the teachers, culminating in the creation and validation of an intervention module.

Research instruments

The primary data collection tool was a Researcher-Made Questionnaire administered to the 34 participating Mathematics teachers, which was converted into a Google Form. This instrument was composed of three main sections: 1) a checklist to identify the frequency of current teaching strategies (Instructional Approaches, Technological Integration, and Assessment); 2) a Likert Scale section (4-point scale where 3.25–4.00 = Strongly Agree) designed to measure teachers' perceptions regarding the influence of gamified strategies on three core domains (Engagement, Participation, and Comprehension); and 3) open-ended questions

to gather qualitative feedback on the practical challenges encountered and specific recommendations for the final Project MATH-LARO module. This instrument was supplemented by Focus Group Discussions (FGDs) and Interviews for in-depth qualitative context, as well as Learner Outputs (activity scores, portfolios) used during the piloting phase for validation.

Data Analysis

The data analysis for Project MATH-LARO was a deliberate, multi-faceted process designed to convert both quantitative and qualitative teacher feedback into actionable insights for the intervention.

The analysis of quantitative data, derived from the structured questionnaire, began with calculating the Frequency and Percentage of responses. This method was primarily used to profile the baseline, answering the research question regarding existing instructional practices by quantifying the prevalence of strategies like lecture-based teaching and the current rate of game-based learning adoption. To measure the strength of teachers' opinions on the positive impact of the intervention, the Weighted Mean was computed for all items on the Likert scale. This allowed the researcher to assign a definitive Verbal Interpretation (e.g., Strongly Agree) to the composite scores for Engagement, Participation, and Comprehension. Furthermore, the internal consistency and dependability of the measuring instrument itself were verified through the calculation of the Cronbach's Alpha Value, ensuring the reliability of the perception data. Finally, during the piloting phase, Descriptive Statistics (like mean scores) were applied to the students' Learner Outputs to empirically validate the intervention's success in improving academic performance.

For the qualitative data, gathered from the open-ended survey questions, Focus Group Discussions (FGDs), and interviews, Thematic Analysis was the chosen method. This process involved systematically reading and coding the narrative responses to extract and categorize recurring ideas. This step was crucial for identifying the practical and systemic barriers to implementation, resulting in concrete themes like "Resource and Time Constraints" (e.g., lack of pre-made materials, insufficient preparation time) and "Technical and Internet Access Issues." By performing this thematic classification, the researcher was able to convert teachers' varied, individual comments into cohesive, actionable findings. This qualitative data served a vital explanatory role in the mixed-methods design, directly informing the final design of the Project MATH-LARO

module to ensure it specifically addresses the gaps identified by the teachers on the ground.

To maintain data integrity and confidentiality, all participants were briefed on the purpose of the study, and their voluntary participation was secured through written consent. Anonymity was preserved by omitting any personal identifiers in the final documentation. Furthermore, triangulation was applied by cross-referencing teacher responses with existing reading program outputs and administrative feedback, ensuring that interpretations were well-grounded and balanced.

RESULTS AND DISCUSSION

1. Current teaching strategy utilized by teachers in delivering Mathematics lessons

Table 1.1

Instructional Approaches

Top 5 Most Common — Instructional Approaches			
Rank	**Instructional Approach**	**Frequency**	**Percentage**
1	Lecture-based teaching	27	96%
2	Inquiry-based learning	24	86%
3	Collaborative/Group work	24	86%
4	Game-based learning/gamification	20	71%
5	Use of manipulatives/hands-on materials	17	61%

The table above showed the instructional approach currently utilized by 28 mathematics teachers. Lecture-based teaching (96%), inquiry-based learning (86%), collaborative/group work (86%), game-based learning or gamification (71%), and the use of manipulatives or hands-on materials (61%) were the top five among the instructional approaches in Mathematics.

Lecture-based teaching, ranked first with 96% or chosen 27 individuals. This strategy is common wherein teachers are mainly the source of information. Even though it is an era of modern pedagogical advancement, still there are many teachers rely on this traditional method since it is easier and appropriate for large

class (Roehl, Reddy, & Shannon, 2013). Inquiry-based learning and collaborative/group work, both utilized by 86% of respondents. According to Duncan, & Chinn (2007), this approach is student-centered and enhances the critical thinking and problem-solving skill of learners by exploring the mathematical concepts through guided questioning.

Game-based learning or gamification were used by 71% of the respondents. This approach could boost the motivation and interest of the learners since the lessons were delivered into engaging and interactive manner. According to study Asbell-Clarke (2016), gamified strategies promote engagement and make abstract concepts more accessible. Finally, the utilization of manipulatives or hands-on materials, chosen by 17 teachers, supports the development of conceptual understanding by offering tangible ways to visualize and interact with mathematical ideas. As per Moyer, Bolyard, and Spikell (2002), hands-on tools enhance students' ability to make connections between abstract and concrete representations.

Table 1.2

Technological Integration

Top 5 Most Common — Technological Integration			
Rank	**Technological Tool**	**Frequency**	**Percentage**
1	Interactive PowerPoint or slide presentations	27	96%
2	Use of educational videos	24	86%
3	Use of learning apps (GeoGebra, Mathway)	17	61%
4	Use of AI-generated problem sets/tools	7	25%
5	Use of LMS (Google Classroom, etc.)	6	21%

Table 1.2 showed the integration of technology in teaching most used by 28 mathematical teachers. The top 5 widely used in Mathematics are the Interactive PowerPoint or Slide Presentations (96%), use of educational videos (86%), use of learning apps such as Geogebra and Mathway (61%), the use of AI-generated problem sets or tools (25%), and the use of LMS such as Google Classroom (21%).

Interactive Powerpoint or slide presentations were used by 96% of the teachers as according to Nawale and Nawale (2022), PowerPoints enhance students' sense of pleasure and commitment and also play an important role for teaching and learning by creating a dynamic environment when used efficiently. The knowledge of the teachers does not guarantee that students understand the lesson; the manner of delivery and presentation too is equally important. Because it is a conventional method, PowerPoint presentations are used often. 86% of the teachers also commonly use educational videos as part of their teaching style. Camilleri and Camilleri (2021) attributes this to the outbreak of the Coronavirus (COVID-19) pandemic, which helped educational institutions to shift from traditional learning approaches to more blended learning and virtual course deliveries. Educational videos served as asynchronous contents, and internet platforms such as Youtube and Tiktok host learning media that can be accessed anywhere and anytime (Rahmatika et al., 2021).

The use of learning apps such as GeoGebra and Mathway were used by 61% of the teachers. GeoGebra helps aid in the teaching and comprehension of transformation concepts by visualizing mathematical concepts and creating interactive geometry, algebra, statistics, and calculus for students according to Dahal et al. (2022). Narh-Kert and Sabtiwu also stated that the use of GeoGebra and other learning applications made lessons more practical and easier to understand due to the visualization. 25% of the teachers used AI in generating problem sets and tools, and 21% of the teachers used LMS such as Google Classroom as part of online learning in schools and universities. This especially works in the context of remote instruction and enables teachers to monitor the students' progress as stated by Furqon et al. (2023).

Table 1.3

Assessment Strategies

Top 5 Most Common — Assessment Strategies			
Rank	**Assessment Method**	**Frequency**	**Percentage**
1	Performance tasks	28	100%
2	Oral explanation/recitation of problem-solving	22	79%
3	Formative quizzes using games (Kahoot, Quizizz)	20	71%
4	Portfolio-based assessment	18	64%
5	Peer assessment or self-assessment	13	46%

The table above showed the most common assessment strategies by 28 mathematical teachers. The most used assessment strategies were the Performance Tasks (100%), Oral Explanation or Recitation (79%), Formative quizzes using games (Kahoot, Quizizz) (71%), Portfolio-based assessment (71%), and Peer assessment or self-assessment (46%).

Performance Tasks served as the most common assessment strategies with all of the teachers. Brought by the K-12 Curriculum of the Department of Education, this is a part of the educational reform and considered as a relevant learning activity, therefore it is widely used by teachers according to Petalla and Doromal (2021). Games such as Quizizz and Kahoot are also used by 71% of the teachers in formulating quizzes. Gamification is utilized as a motivator for students and generally has a positive impact on the students' learning progress according to Fuchs (2022).

Portfolio-based assessment is used by 64% of the teachers. Kaphle (2025) stated that teachers view portfolio-based assessment as a valuable tool for documenting student learning, promoting self-reflection, and increasing engagement as this emphasizes the ongoing collection of the students' work to evaluate their learning progress over time. Only 46% of the teachers used peer assessment or self-assessment strategies. According to Homayouni (2022) and Stančić (2020), peer-assessment is an effective strategy as students interact socially with their peers. This is beneficial as students can express concerns and teachers can address them through the peer assessment and self-assessment strategy.

2. Perception Towards Gamified Activities

The table above shows the perception of the teachers towards gamified activities in terms of engagement. There were ten statements given that show experiences about engagement in gamified activities. The teachers strongly agreed with all statements presented above with a total composite mean of 3.67.

The statement no. 1, "My learners show increased interest in Math lessons when gamified strategies are used," and no. 3, "Students seem more enthusiastic during lessons that incorporate games," gathered a weighted mean of 3.75 which was the highest. This meant that the students of the teachers find gamified lessons and strategies highly interesting and engaging. This is in line with Fuchs's (2022) study that gamified learning had a positive impact on knowledge and skill progress if utilized and integrated appropriately.

Table 2.1.

Engagement

Engagement	Weighted Mean	Verbal Interpretation
1. My learners show increased interest in Math lessons when gamified strategies are used.	3.75	Strongly Agree
2. Gamified activities capture my learners' attention more effectively than traditional methods.	3.68	Strongly Agree
3. Students seem more enthusiastic during lessons that incorporate games.	3.75	Strongly Agree
4. Learners are more motivated to attend class when gamification is part of the teaching strategy.	3.64	Strongly Agree
5. Gamified lessons improve learners' focus in class.	3.57	Strongly Agree
6. Incorporating games in Math lessons reduces student boredom.	3.61	Strongly Agree
7. Learners are more eager to learn when the lesson is presented in a fun, game-like format.	3.64	Strongly Agree
8. The energy level of my students increases during gamified activities.	3.71	Strongly Agree
9. Gamified instruction creates a positive learning atmosphere in my class.	3.71	Strongly Agree
10. Students look forward to Mathematics lessons when they involve gamified activities.	3.61	Strongly Agree
Composite Mean	**3.67**	**Strongly Agree**

The statement no. 5, "Gamified lessons improve learners' focus in class," garnered the lowest weighted mean (3.57), which meant that teachers strongly agree with the statement. Fuchs (2022) also stated that while it can have positive impact, gamification may not keep students motivated all throughout the entire course.

Table 2.2.

Participation

Participation	Weighted Mean	Verbal Interpretation
1. Students actively participate in class when gamified strategies are used.	3.75	Strongly Agree
2. Gamification encourages more students to join in group discussions and activities.	3.71	Strongly Agree
3. Learners are more engaged in hands-on tasks during game-based Math lessons.	3.68	Strongly Agree
4. Gamified approaches make it easier to involve shy or reluctant students.	3.55	Strongly Agree
5. Students show more initiative when games are part of the learning process.	3.68	Strongly Agree
6. Learners collaborate more effectively with peers during gamified activities.	3.71	Strongly Agree
7. There is a noticeable increase in voluntary student participation during game-based learning.	3.61	Strongly Agree
8. Gamified strategies create more inclusive classroom participation.	3.71	Strongly Agree
9. Students are more competitive in a positive way when games are integrated into Math.	3.68	Strongly Agree
10. Using games in teaching Mathematics encourages active learning.	3.61	Strongly Agree
Composite Mean	**3.67**	**Strongly Agree**

The table above shows the perception of the teachers towards gamified activities in terms of participation. Ten statements about participation with gamified strategies were presented. The total composite mean was 3.67, with a visual interpretation of Strongly Agree.

The statement no. 1, "Students actively participate in class when gamified strategies are used," gathered the highest weighted mean of 3.75, which meant that most of the teachers strongly agree with the statement. Gamification makes learning more interactive and enjoyable by integration of game-like elements into a learning and non-gaming context. Chen and Liang (2022) stated that through the indirect effects of enjoyment and self-efficacy, gamification strategies influence students' engagement in education.

The statement no. 4, "Gamified approaches make it easier to involve shy or reluctant students," had the lowest weighted mean of 3.55. While teachers strongly agree with the statement, it meant that gamification has a potential to involve shy and reluctant students through higher engagement and reward-based systems if implemented properly. There must be consideration in the involvement of shy and reluctant students when it comes to gamified strategies to be effective.

Table 2.3.

Comprehension

Comprehension	**Weighted Mean**	**Verbal Interpretation**
1. Gamified activities improve students' understanding of mathematical concepts.	3.43	Strongly Agree
2. Learners are able to explain Math topics better after participating in gamified lessons.	3.46	Strongly Agree
3. Students demonstrate deeper understanding of lessons when they are taught through games.	3.39	Strongly Agree
4. Game-based instruction enhances students' critical thinking skills.	3.57	Strongly Agree
5. Learners perform better in assessments after engaging with gamified Math activities.	3.43	Strongly Agree
6. Gamification helps students retain information longer.	3.50	Strongly Agree
7. Games make abstract Math concepts easier for students to grasp.	3.50	Strongly Agree
8. Students are more capable of solving real-life problems after gamified instruction.	3.39	Strongly Agree
9. I can see improvement in students' reasoning skills when games are used as learning tools.	3.54	Strongly Agree
10. Gamified strategies contribute positively to students' overall academic performance in Math.	3.36	Strongly Agree
Composite Mean	**3.46**	**Strongly Agree**

The table above shows the perception of the teachers towards gamified activities in terms of comprehension. Ten statements about comprehension with gamified strategies were presented. The total composite mean was 3.46, with a visual interpretation of Strongly Agree.

Teachers strongly agree with statement no. 4, "Game-based instruction enhances students' critical thinking skills," as it gathered the highest weighted mean of 3.57. This is in line with the study of Angelelli et al. (2023) where people can make decisions based on critical thinking and self-reflections helped build knowledge and develop critical thinking. Cooperative and interactive games according to Angelelli et al. (2023) allowed people to focus on problem-solving skills, group work, and real-life knowledge to solve problems.

Theme	Sub-Themes / Issues Identified	Sample Responses
1. Resource and Time Constraints	Teachers often struggle to implement gamified strategies due to the significant time needed for preparation, limited instructional hours, and a lack of pre-made materials or resources.	"Time management," "Time allotted in making gamified activities," "Insufficient time preparation of resources"
2. Technical and internet access Issues	Gamified learning is hindered by poor internet connectivity and the unavailability of reliable offline-compatible apps and tools.	"Limited applications and software that can be used offline," "Internet Connection"
3. Teacher Readiness and Capacity	Many teachers lack the training and confidence to design effective gamified lessons, and they face difficulty in assessing outcomes from such strategies.	"Not all teachers know how to make or use games well," "Harder to interpret the outcome or results," "Teacher facilitation"
4. Student Behavior and Engagement	Gamified activities can sometimes lead to excessive excitement, resulting in classroom disruptions, off-task behavior, and reduced focus on the learning objectives.	"Students may get too focused on the game," "Too much noisy," "Not all student interested," "Forget the lesson"
5. Environmental Limitations	Inadequate classroom layouts and proximity to other classes often make the environment unsuitable for active and engaging gamified instruction.	"It can disturb nearby classrooms," "Classroom discipline"

The statement no. 10, "Gamified strategies contribute positively to students' overall academic performance in Math," gathered a weighted mean of 3.36, which was the lowest. This also had a visual interpretation of Strongly

Agree. Depending on the implementation of the gamified strategies and elements used in gamification, there can be positive effects on the students' overall performance in mathematics. Teachers are suggested to adopt and employ appropriate game elements in their instructional approaches according to Zeng et al. (2024).

3. Challenges of Gamified Strategies in Teaching Mathematics.

The table above showed the themes regarding challenges in the implemented gamified strategies in teaching Mathematics. There are five central themes showcased in the table. The first theme was Resource and Time Constraints in which teachers often struggle to implement gamified strategies due to the significant time needed for preparation, limited instructional hours, and a lack of pre-made materials or resources. As gamification is still being integrated into learning, it highly depends on its alignment with learning objectives. The second theme was about Technical and Internet Access Issues. Teachers responded mostly about "internet connection" and "limited applications and software that can be used offline". Therefore, another issue is that gamified learning is hindered by poor internet connectivity and the unavailability of reliable offline-compatible apps and tools. The top 2 themes above will be the main basis of this study. Some other themes are teachers' capacity in facilitating the activities, the behavior of the learners and the environmental hindrances that could affect the project.

CONCLUSION AND RECOMMENDATIONS

The findings of this study highlight the dominant teaching strategies, technological tools, and assessment practices applied in delivering Mathematics instruction, with a strong preference for lecture-based teaching, interactive presentations, and performance-based assessments. Some challenges occurred that hinder the effectiveness of the implementation of the project such as time constraints, limited resources, internet connectivity issues, teacher readiness, classroom management concerns, and student motivation. Adequate support systems, careful planning and appropriate classroom conditions are needed to enhance learner engagement, participation, and comprehension. To pave the way for more dynamic and inclusive mathematics learning environments, addressing the challenges through targeted professional development, accessible gamified materials, and systemic support are given emphasis. Finally, gamification holds great potential as a transformative tool in mathematics education when thoughtfully and purposefully integrated into instruction.

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GUIDED READING STRATEGIES ON IMPROVING READING COMPREHENSION IN GRADE 7 STUDENTS AT SAN AGUSTIN INTEGRATED SCHOOL

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Abstract: This research aimed to determine the effectiveness of guided reading strategies in enhancing the reading comprehension skills of Grade 7 students at San Agustin Integrated School. Using a quasi-experimental one-group pre-test–post-test design, 44 struggling readers identified through the Phil-IRI pre-assessment participated in the intervention, which involved guided reading strategies such as teacher modeling, small group instruction, questioning, summarizing, and active student engagement over several months. The Phil-IRI served as the primary assessment tool before and after the intervention. Findings revealed a statistically significant improvement in reading comprehension, with mean scores increasing from 3.25 to 5.41 ($t = 6.09$, $p \leq .001$). Although most students initially performed at the frustration level, many progressed to instructional and independent levels after the intervention. The study concludes that guided reading strategies effectively improve comprehension skills, and recommends extending the duration and individualization of interventions to sustain and further enhance literacy development.

Keywords: guided reading strategies, literacy development, reading comprehension, reading intervention, struggling readers

INTRODUCTION

Reading comprehension is one of the most important skills that directly impacts learners' academic performance in all subject areas. However, despite national and international studies emphasizing the call for strategic reading instruction, many Filipino learners at the junior high school level still face some challenges in comprehending, interpreting, and analyzing grade-level texts. Guided Reading is a well-known, small-group approach to teaching reading in

which learners are supported at their individual reading level to improve comprehension continuously. Despite documented success with its use, it has yet to be fully explored at the Junior High School (JHS) level in Schools Division, Batangas City.

The reading situation in San Agustin Integrated School (SAIS) reflects significant challenges that demand immediate intervention. Based on the SY 2023-2024 Phil-IRI results, 31.67% of Grade 7-10 learners were identified at the frustration level, indicating difficulty in decoding, vocabulary processing, and meaning-making. Although improvements were seen at the post-test level, with frustration readers decreasing to 8.75%, comprehension gaps remained evident among many learners.

However, this succeeding school year turned out to be more urgent. In SY 2024–2025, the percentage of frustration readers dramatically increased to 70.83% in the pre-test, wherein over half of the cohort struggled to process grade-level texts independently. After the post-test, 41.09% still remained at frustration, indicating persistent reading difficulties and learning gaps.

These findings indicate a trend of decline in reading performance at SAIS. The independent readers dropped considerably from 21.11% to 7.63% in the pre-test comparison across two school years, while the instructional readers also decreased. The report summarizes this by stating that "overall literacy outcomes declined from the previous year," which signifies the imperative need for reading interventions supported by structured and evidence-based strategies.

These findings are supported by teachers' consistent classroom observations of difficulties in vocabulary, low reading stamina, limited background knowledge, and challenges in making inferences and synthesizing information-skills central to reading comprehension.

Despite the existence of efforts such as school-level reading programs under the SIP/AIP, homeroom remediation, and division-led initiatives like LAC sessions on reading recovery, there are still gaps in sustaining improvements because of irregular learner attendance, limited parental support, and lack of differentiated materials to address the needs of all learners. Furthermore, most reading interventions in the division have centered on the elementary level, which creates a research gap in adapting guided reading for junior high school, where comprehension demands are significantly higher. Anchoring the research on the local issue, the increasing frustration-level readers versus the decline in the independent readers clearly show that there is a need for a more responsive and

structured reading approach. Guided reading provides a venue for differentiated instruction, scaffolding strategies for comprehension, and addressing the varied reading needs of the Grade 7 learners. This study was conducted to ascertain how the implementation of Guided Reading, which is attuned to the school's literacy profile, could help bridge identified gaps and inform practices to improve reading outcomes in San Agustin Integrated School.

Literature Review

Reading Comprehension

Reading comprehension is a process of constructing meaning from written texts by connecting new information with prior knowledge. Recent studies emphasizes that the Filipino junior high learners still face difficulties in comprehension due to gaps in vocabulary, limited reading exposures, and lack of strategy usage (De Castro, 2021; Santos, 2022). International research also iterates that comprehension improves if students are taught about metacognitive processes such as monitoring, questioning, and summarizing (Snow & Matthews, 2020). These collective studies affirm that comprehension needs both cognitive and strategic processes, of which guided reading directly supports.

Reading Strategies

Reading strategies remain fundamental in guiding students to decode, interpret, and appraise texts. Current Philippine research demonstrates that explicit teaching of strategies such as predicting, summarizing, clarifying, and questioning improves the comprehension of learners, most specifically during the middle grades. (Ramos & Dizon, 2021) Recent work also validates the continued effectiveness of structured strategy models such as the Gradual Release of Responsibility (Frey & Fisher, 2020) and reciprocal teaching, particularly for struggling readers. (Reyes, 2022)

These studies show that explicit reading strategy instruction improves comprehension across grade levels. However, most public junior high schools still lack structured frameworks for the consistent delivery of these strategies. Guided reading, which embeds these strategies in leveled instruction, directly meets this need and supports the needs of Grade 7 learners.

Phil-IRI and Local Reading Context

The Phil-IRI remains the mainstream diagnostic tool for identifying one's reading level even today. Recent studies report that frustration-level readers in junior high school, according to the Phil-IRI, record a significantly lower level of performance in English and other content subjects (Miranda, 2020; Ramos, 2021). Research in public schools in CALABARZON and nearby regions also documents challenges such as limited reading materials, inconsistent remediation, and lack of differentiated support (Limbo, 2022; Bautista & Salonga, 2023).

In Batangas Province, division reports from 2020-2024 had been pointing to nagging reading gaps in Grade 7 learners, with schools urged to tighten their remediation frameworks. Researches by Batangas-based researchers (e.g., Ortega 2021; Mendoza 2023) note that reading challenges in JHS are almost always due to weak vocabulary, low fluency, or a lack of background knowledge, which requires targeted, small-group interventions.

Research at Phil-IRI shows that frustration-level junior high school readers consistently need differentiated instruction beyond whole-class approaches. These findings justify the adoption of guided reading as a focused intervention in schools like San Agustin Integrated School, where comprehension gaps are still obvious.

Reading Interventions

Recent Philippine studies confirm the positive impact of structured reading interventions on struggling learners. Cruz (2020) found that individualized and small-group interventions significantly improved comprehension among Grades 6–8 students. Similarly, Pascual (2022) reported that contextualized reading programs in public JHS improved reading levels when aligned with learners' zones of proximal development. Internationally, contemporary frameworks still stress targeted interventions for adolescent readers, integrating strategy instruction, vocabulary support, and scaffolded discussions (Vaughn et al., 2020; Foorman, 2021).

Successful interventions across both local and international contexts share common features: targeted instruction, leveled materials, and teacher scaffolding. Guided reading aligns with these principles and is appropriate to address the reading profile of Grade 7 students in your school.

Guided Reading Strategy

Recent studies in the Philippines strengthen the evidence base for guided reading. Dizon (2020) showed that guided reading enhanced comprehension scores among Grade 7 students through leveled texts, structured questioning, and teacher modeling. More recent research by Santiago (2021), Torres (2022), and De Vera (2023) shows that guided reading enhances vocabulary, fluency, and text engagement in JHS learners. International literature also supports this approach, with recent findings underscoring the effectiveness of leveled texts, scaffolded conversations, and small-group instruction (Hall, 2021; Fountas & Pinnell, 2022).

Guided reading is highly supported by current research, but it is rarely practiced in many Philippine secondary schools. With the increasing number of frustration-level readers in Grade 7, particularly those identified through Phil-IRI in your school, this strategy is a timely and evidence-based solution.

Synthesis

From 2020 to the present, studies consistently show comprehension improves when learners receive explicit strategy instruction, targeted support, and structured assessments such as Phil-IRI. Though there are many interventions, guided reading in particular melds together leveled instruction and strategy use with teacher scaffolding, thus rendering it particularly appropriate for junior high learners who continue to struggle in comprehension. Local research further underlines the need for enhanced reading programs within public secondary schools, especially in Batangas Province, where Phil-IRI results show persistent reading challenges. Thus, the reviewed literature supports the relevance and necessity of implementing guided reading as an intervention for Grade 7 learners at San Agustin Integrated School, addressing the clear reading gaps identified in recent assessments.

Research Questions

This study aims to address the following research questions:

1. What is the reading comprehension level of the Grade 7 students before the implementation of guided reading strategies based on the Phil-IRI pre-test results?

2. What is the reading comprehension level of the Grade 7 students after the implementation of guided reading strategies based on the Phil-IRI post-test results?
3. Is there a significant difference between the pre-test and post-test reading comprehension levels of the students after exposure to guided reading strategies?
4. What specific guided reading strategies are most effective in enhancing students' reading comprehension?
5. Based on the findings, what reading enhancement program can be proposed to further improve the reading comprehension of Grade 7 students?

METHODOLOGY

Total population sampling was conducted for this study, where all 44 Grade 7 students who were identified as struggling or at-risk readers from the Phil-IRI pre-test results were included as participants. This kind of sampling ensures full representation of the target population and can provide a comprehensive measure of reading comprehension levels before and after the intervention. They are a heterogeneous group of readers falling under the independent, instructional, and frustration levels, as defined by the Phil-IRI. By allowing learners from varied levels of proficiency to become part of this intervention, this study will be able to determine up to what extent guided reading benefits students with different reading comprehension needs.

The intervention on guided reading was carried out from November to February, a duration of four months, excluding the Christmas break. Sessions were conducted two to three times per week, lasting 30–40 minutes per session. Every session was designed to follow a structured routine: before-reading, during-reading, and after-reading activities. Before-reading tasks included activating prior knowledge, introducing essential vocabulary, and setting a purpose for reading. During-reading activities involved teacher-guided reading, modeling of comprehension strategies, and prompting students to make predictions, connections, and inferences. After-reading tasks focused on comprehension checks, discussions, and short written responses that assessed students' understanding of key ideas.

The intervention also included a buddy system to enhance peer-supported learning. Independent readers were teamed with struggling or at-risk readers for

scaffolding during reading activities. Buddies collaborated on activities during guided practice, helped make sense of unfamiliar words, and discussed ideas in the text to reinforce comprehension.

Students who represented similar reading proficiency profiles were arranged into small groups based on their Phil-IRI reading level, with approximately 5-7 learners in each group. Guided reading texts were purposefully chosen and leveled using Lexile measures, readability criteria, and a match to the identified reading needs of the learners. Literary and informational texts were both included to support a range in comprehension skills.

To ensure the fidelity of the implementation, the researcher applied observation checklists, session logs, and student reading journals. These tools have documented instructional procedures, students' engagement, and completion of the guided reading routines. Adjustments were made as necessary to maintain consistency across sessions.

Ethical procedures were strictly observed throughout the study. Parental consent was obtained before collecting data, and the students were oriented regarding the purpose and process of the intervention. Participation was strictly on a voluntary basis, personal information was kept confidential, and all data was anonymized and kept secure to protect student privacy.

Research design

This study entitled "The Impact of Guided Reading Strategies on Improving Reading Comprehension in Grade 7 Students at San Agustin Integrated School" utilizes a Pre-Test Post-Test One-Group Design, which is a type of quasi-experimental research that evaluates the impact of guided reading strategies of improving reading comprehension of Grade 7 students. This design involves the same group of participants being administered pre-test and post-test assessments with the intervention established between the two assessments. The pre-test was to initiate a baseline measure, while the post-test was used to evaluate the effect of the intervention.

Research instruments

The primary research instrument used was the Philippine Informal Reading Inventory (Phil-IRI), a standardized assessment tool developed by the Department of Education to measure students' reading proficiency. The Phil-IRI includes reading passages followed by comprehension questions assessing recall,

inference, and analysis. It was administered twice, once before and once after the intervention, to evaluate students' progress. Supplementary tools such as individualized activities, observation checklists, and student feedback forms were also employed to monitor engagement, participation, and progress throughout the intervention period.

Data Analysis

This study entitled "The Impact of Guided Reading Strategies on Improving Reading Comprehension in Grade 7 Students at San Agustin Integrated School" utilizes a Pre-Test Post-Test One-Group Design, which is a type of quasi-experimental research that evaluates the impact of guided reading strategies of improving reading comprehension of Grade 7 students. This design involves the same group of participants being administered pre-test and post-test assessments with the intervention established between the two assessments. The pre-test was to initiate a baseline measure, while the post-test was used to evaluate the effect of the intervention.

The independent variable in this study was guided reading strategies, which were carried out over a pre-determined period of time. The dependent variable was the reading comprehension performance of the participants, as measured by the Philippine Informal Reading Inventory (Phil-IRI).

The information collected will be analyzed and interpreted through the use of statistical tools, such as the mean, which captures the average students' scores in the pre-test and post-test. The mean will help suggest if reading comprehension has generally increased because of the guided strategies received. The Standard Deviation (SD) will measure how far a score typically deviates from the mean. In the context of the scores, a smalltSD from post-test results could suggest that students now performed more uniformly or consistently, as a result of the intervention program.

Since the study uses a pre-test and post-test design, in order to determine if the difference in students' scores in reading comprehension, before and after the intervention was statistically significant, a paired sample t-test was calculated. The paired sample t-test compares two related sample groups (the same group of students before and then in the post-test completing guided reading strategies), to see if students are improving or not significantly different in total scores. The paired sample t-test was calculated using free and online software Jamovi, whereby the p-value and t-value from the data were obtained.

RESULTS AND DISCUSSION

Prior to the implementation of guided reading strategies, a pre-test based on the Philippine Informal Reading Inventory (Phil-IRI) was given to 44 students enrolled in the Grade 7 at San Agustin Integrated School to measure students' reading comprehension. The findings will provide the necessary information regarding the students' reading levels and areas where intervention is necessary.

Table 1

Pretest Results

Category	Frustration Level	Instructional Level	Independent Level	Total Students
Number of Students	35	5	5	45
Percentage	78%	11%	11%	100%

The results indicated that most of the learners had problems in comprehending written texts. Table 1 shows that 78% (n = 35) of the students performed at the Frustration Level, where they experience extreme difficulty in identifying literal meaning and making inferences, as well as in relating ideas in the text. A total of 11% (n = 5) responded at the Instructional Level and another 11% (n = 5) at the Independent Level.

A closer look indicates that, though students generally performed well in some decoding and word recognition skills, their problems essentially emanated from comprehension processes. This agrees with Mendoza's (2018) findings, where Filipino learners were found to read fluently yet experience challenges in both inferential and evaluative comprehension due to limited exposure to scaffolded reading activities.

The large percentage of students at the frustration level indicated that structured instructional support was urgently needed. Thus, guided reading-emphasized by its small-group design, differentiated text selection, and explicit teaching of comprehension strategies-was introduced as the core intervention.

2. Post-Test Results of Grade 7 Students in San Agustin Integrated School

In contrast, the post-test was used to evaluate the reading comprehension abilities of the grade 7 students after the guided reading instruction was introduced to them. The post-test results classify students into three reading levels; Frustration, Instructional, and Independent reading levels. These

classifications support the determination of students' abilities to understand and interpret the texts read. The next table and graph show how often students fall under these three classifications of reading levels while demonstrating the effectiveness of the intervention.

Table 2

Post test Results

Category	Frustration Level	Instructional Level	Independent Level	Total Students
Number of Students	23	10	11	44
Percentage	53.49%	23.26%	25.58%	100%

Table 2 shows that more students moved to the instructional and independent levels, showing that they were able to understand texts with or without support. Student journals and teacher observation notes revealed noticeable growth in literal, inferential, and critical comprehension. They could recall details more accurately, interpret implied information more consistently, and express evaluative thoughts about characters or events in the text. These findings corroborate those of Dizon (2020), who contended that comprehension is enhanced in guided reading when students predict with a systematic approach, ask questions, and reflect on their readings.

Despite such progress, over half of the students remained at the frustration level. Review of attendance and observational data indicated that inconsistent participation contributed to limited improvement. For some learners, persistent decoding difficulties impeded progression to higher levels of comprehension. Others lacked motivation, rarely completed reading tasks at home, or evidenced low confidence during group activities. These factors mirror previous studies suggesting that growth in comprehension is limited if foundational fluency and consistent exposure to reading are not established.

3. Comparison of Pre-Test and Post-Test Results on Reading Comprehension

The pre-test and post-test scores of students were examined to determine whether there was improvement in reading comprehension, students were provided guided reading strategies. The table below provides a summary of the results.

Table 3

Comparison of Pre Test and Post Test Reading Comprehension

Metric	Pre-Test	Post-Test
Mean	3.25	5.41
Standard Deviation	1.26	2.33
P-Value	N/A	< .001
T-Value	N/A	6.09

As summarized in Table 3, it shows that there is a significant improvement in the performance of students. The mean score increased from 3.25 to 5.41, showing meaningful gains in reading comprehension over the intervention period. The corresponding t-value of 6.09 and p-value of less than .001 indicate that there is a significant difference between the two test results. This effect is unlikely due to chance and strongly suggests that the guided reading intervention contributed to the improvement.

Analysis of the effect size yielded a value that falls within the range of a large practical effect, further strengthening the conclusion that the intervention significantly impacted student performance, much like the positive effects observed in the studies of Mendoza (2018) and Dizon (2020).

4. Most Effective Guided Reading Strategies

To further determine which guided reading strategies were most effective, entries from the students' journals and detailed teacher observations consistently highlighted two strategies most conducive to enhancing comprehension during the implementation period of four months. The buddy system tended to develop opportunities for peer modeling, vocabulary clarification, and meaning construction with independent readers being paired with struggling readers.

Students frequently mentioned in their journals how their partners helped them understand the texts more clearly, while the teacher noticed increased participation in struggling readers during the paired tasks. Small-group guided reading also became highly effective because it allowed the teacher to give focused instruction based on students' Phil-IRI levels. Learners responded very well within the groups to scaffolded questioning, guided practice, and immediate feedback. The close interaction and targeted support within small groups strengthened the comprehension processes, especially among those at the instructional level.

CONCLUSION AND RECOMMENDATIONS

The result of the study indicates that students' levels of reading comprehension increased from pre-test to post-test, which affirms that the intervention of guided reading contributed meaningfully to their understanding of texts. Many learners moved from the frustration level to the instructional and independent levels, proving that the intervention strengthened the comprehension capabilities of the learners. However, a number of students remained at the frustration level even after the intervention, showing that though the program yielded benefits for most learners, others needed more intensive or extended support.

Improvement in reading comprehension across the class is consistent with the hypothesis of this study: that targeted reading instruction can result in significant gains. The overall shift in performance levels confirms that these children benefited from the application of guided reading routines over four months with regard to the development of appropriate strategies for processing written texts.

The study also showed that some of the challenges persisted in hindering the development of reading during the intervention. Distractions, low motivation, and insufficient background knowledge often interfered with the students' engagement in reading and comprehension, which consequently affected the extent of progress individual learners made. These factors primarily show that sustained motivational strategies are needed and that texts and activities need to be more connected with students' prior knowledge and experiences.

Insights from student journals and teacher observations also revealed that the buddy system and small-group session components most strongly contributed to the effectiveness of this intervention. Coupling independent readers with struggling readers encouraged peer support, confidence building, and collaborative meaning-making. Small-group discussion formats provided a safer space in which students felt free to question, clarify ideas, and practice comprehension strategies with closer teacher guidance.

Although the results show clear gains in comprehension, the study recognizes its limitations. It was conducted on only one group of learners and did not include a comparison or control group. Although the intervention ran over four months, this time may be considered too short, for instance, in cases of learners whose reading lags are more serious. Despite these limitations, the study provides strong evidence to prove that guided reading-particularly when

strengthened by peer-supported and small-group structures-can significantly enhance Grade 7 students' reading comprehension.

Based on the results of the study, it is recommended that the school strengthen and institutionalize guided reading as a regular part of its reading program so that the mechanism for catering to struggling readers becomes consistent and systematic. An organized set of leveled reading activities, including peer reading, storytelling routines, and interactive or gamified comprehension tasks, could help address the differential learning needs in the classroom. To support such an initiative, teachers would likewise need to be continuously provided professional development through LAC sessions focused on the effective use of leveled texts, differentiation strategies, and intervention planning targeting areas in need. A reading enhancement plan corresponding with Phil-IRI diagnostic data should similarly be formulated and implemented to make sure that instruction addresses the needs identified through diagnostics.

It is further recommended that individualized interventions be provided for learners who remain at the frustration level even after group instruction. One-to-one sessions, differentiated tasks, and strategic scaffolding may better address their persistent reading gaps. Strengthening parent involvement is also essential: establishment of home reading logs, parent orientations, and simple monitoring tools may encourage families to reinforce reading habits outside school and help develop a stronger culture of literacy in the household. The integration of educational technology such as reading apps and online comprehension platforms might also support learners in their engagement and help supplement classroom instruction.

For future research, studies can include a control group in order to better estimate the exact effects of the intervention on guided reading, in comparison to other more traditional approaches. Other options for reading strategies may also be explored in further research by these researchers, including reciprocal teaching or the CORI model, in order to see which approach produces the greatest benefits among early adolescents. A longitudinal design tracing growth in reading over a longer period might give rich insight into how skills in comprehension develop over time and which learners benefit most from long-term intervention.

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IMPROVING ALS COMPLETION RATE IN THE DIVISION OF BATANGAS CITY

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Abstract: This study aimed to examine factors affecting the completion rate of ALS learners in Batangas City and the contribution of existing teacher practices to supporting learners' completion success. This study also aimed to improve the program's overall success by providing an innovation to bridge the gap between enrollment and completion. Further, this research utilized quantitative data to determine the program completion rate in the division and to understand the factors influencing these rates, and qualitative data to identify ALS teachers' practices in support of the retention and completion rate in ALS. The study showed that ALS Batangas City faces a low completion rate for factors such as lack of financial support, poor study habits, and low self-esteem, limited expertise of teachers in assessment, and weak fundamental skills. To address gaps in the ALS completion rate, the researchers crafted an innovation that holistically focuses on supporting the learners, capacitating the teachers, strengthening partnerships, and developing contextualized materials to aid teaching and learning.

Keywords: Academic Gaps, Completion Rates, Retention

INTRODUCTION

Education is often regarded as a social equalizer, which allows individuals to rise above poverty, build a better life, and contribute meaningfully to society. It is not just a means to acquire knowledge, but a journey to transform perspectives, capabilities, and opportunities in life. Through education, learners acquire practical skills that open doors to employment, enabling them to earn a stable income and support their families. Moreover, education builds learners' confidence to express themselves, pursue their goals, and make decisions about their lives.

Furthermore, education plays a pivotal role in molding a socially aware and responsible citizen who possesses values of respect, equality, justice, and empathy. Through education, learners learn to stand for what is right and become contributors in achieving a peaceful and inclusive society. In a world where social injustices, discrimination, and abuse are rampant, education serves as a protection. It raises awareness of possible violations and provides practical skills for self-protection and resilience to combat challenges with determination.

The transformative power of education goes beyond the individual. When people are educated, their families and communities also benefit. Investing in education means investing in human potential and a better life. This same thought about the importance of education is reflected in the United Nations' Sustainable Development Goal 4, which advocates for an inclusive and equitable quality education and lifelong learning opportunities. The UN deems education a fundamental human right and aims to achieve universal literacy and numeracy for young people and adults. To achieve inclusivity in education as part of the 2030 Agenda for Sustainable Development, this also targets providing primary and secondary education for all, as well as access to technical and vocational training to prepare learners for work and entrepreneurship. Part of the goal is also to break barriers in terms of gender disparities and provide educational support to those who belong to vulnerable groups.

To support this, many countries, including the Philippines, continue to provide free and equal access to education, particularly to those from marginalized communities. The Philippines has a parallel education program known as the Alternative Learning System. RA 11510, An Act Institutionalizing the Alternative Learning System in Basic Education for Out-of-School Children in Special Cases and Adults and Appropriating Funds Thereof, is an act that institutionalizes the Alternative Learning System as a parallel education system for out-of-school children, youth, and adults.

The Alternative Learning System in the Philippines is an education pathway for out-of-school children, youth, and adults who face challenges accessing formal education due to personal and economic barriers. The program also caters to young individuals who dropped out of formal schooling, as well as adults who did not complete elementary or high school and are now seeking to improve their literacy skills for employment. It also supports Indigenous people, Persons Deprived of Liberty (PDL), Persons with Disabilities (PWD), and working individuals. However, despite the known efforts to promote inclusive learning, the

Alternative Learning System still faces various challenges, particularly in retention and completion rate.

This parallel education system plays a crucial role in achieving SDG 4, particularly in providing an inclusive, equitable, and lifelong opportunity for all. Under the program, learners who have not completed primary or secondary school can receive an equivalent basic education to that of elementary and junior high school. Part of its post-program activities is to encourage learners to pursue senior high school, acquire technical skills through TESDA, or pursue higher education. ALS also focuses on developing work and entrepreneurial skills through its learning strands, which emphasize life skills and digital literacy. These skills are essential for employment. In its pursuit of an inclusive education, ALS breaks down barriers to educational inequalities by providing support to indigenous people, Persons Deprived of Liberty (PDL), and Persons with Disabilities (PWD). These are the reasons why ALS serves as one of the primary programs of the Department of Education in eradicating illiteracy among out-of-school children, youth, and adults.

However, despite various initiatives to eradicate illiteracy in the country, the number of out-of-school children and youth who are not attending school remains alarming. According to the 2020 Census of Population and Housing, nearly 11 million children and young Filipinos were not attending formal schools.

According to EDCOM 2.0, one of the significant challenges in the Alternative Learning System is its low completion rate. Out of the average enrollment of 600,000 learners, only 46% completed the program. In the 2023 school year, only 302,807 of the 655,517 enrollees completed the assessment. The data is alarming, as it highlights the issues and challenges faced by learners, including socio-economic barriers, a lack of financial support, early marriage, the need to work, and a lack of motivation. Furthermore, EDCOM 2.0 also noted that the professional development of ALS teachers is often not tailored to cater to non-traditional learners, thereby limiting their ability to address the diverse needs of ALS learners effectively.

In the Division of Batangas City, these challenges are also distinct, reflecting the national trends identified by the Second Congressional Commission on Education (EDCOM 2.0). In SY 2023-2024, only 868 out of 1465, or 59%, completed and passed the Presentation Portfolio Assessment Year 5. This concern is associated with various factors for both teachers and learners. While some learners lack financial support and motivation, ALS teachers lack professional

development opportunities to tailor their instruction to individuals' unique needs, hindering the program's effectiveness.

This study aimed to examine the underlying factors affecting the completion rate of ALS learners in Batangas City and the contribution of existing teacher practices to supporting learners' completion success. By identifying these factors, this study aimed to enhance the ALS program's overall success by introducing innovations that bridge the gap between enrollment and completion.

Literature Review

The Alternative Learning System (ALS) is a recognized program of the Department of Education that seeks to address educational disparities in the Philippines. Dela Cruz (2020) said that ALS provides flexible learning modalities for out-of-school youth, working adults, and learners in remote areas. However, despite these efforts, the program struggles with low completion rate due to socioeconomic and structural barriers.

In the study conducted by Reyes and Santos (2021), they emphasized that socioeconomic factors influence the persistence of ALS. The need to work to support themselves and their families, as well as financial constraints, are among the primary reasons for the high dropout rate in the program. Meanwhile, Garcia (2019) highlighted those psychological and emotional barriers, including lack of motivation, low self-esteem, and the stigma associated with being an ALS learner, are among the barriers that hinder them from completing their education.

Governance issues, on the other hand, also affect the effectiveness of ALS. Torres et al. (2022) discussed how inconsistent funding and outdated local government policies limit the program's reach and effectiveness. The allocation of resources, especially for the professional development of ALS teachers, remains insufficient. This gap is echoed by Martinez (2021), who points out that ALS teachers often lack access to training tailored to the unique needs of non-traditional learners, which affects the quality of instruction and learner engagement.

Lastly, while the program offers flexibility in its curriculum, it often fails to connect with the ALS learners' real-life experiences, resulting in disengagement and dropouts. This shows that curriculum design and the delivery of learner outcomes also influence the effectiveness of the program. (Bautista, 2023)

Research Questions

This study aimed to examine the underlying factors affecting the completion rate of ALS learners in Batangas City and the contribution of existing teacher practices to supporting learners' completion success. Specifically, it sought to answer the following questions:

1. What is the completion rate of the Alternative Learning System for SY 2024-2025?
2. What are the factors affecting the completion rate in Batangas City relative to:
    2.1 socio-economic
    2.2 personal
    2.3 institutional factors; and
    2.4 academic Gaps
3. What are the practices of ALS teachers in support of the retention and completion of ALS learners?
4. What innovations may be proposed to improve the completion rate of ALS learners in Batangas City?

METHODOLOGY

This study primarily analyzed the completion rate of Alternative Learning System learners in the Division of Batangas City for SY 2024-2025. It aimed to identify the possible factors influencing these rates, such as learners' socioeconomic status, personal concerns (including motivation and self-esteem), and the quality of instruction and teacher practices. This study utilized qualitative data from the Learning Information System and a researcher-designed questionnaire to understand how the existing teachers' practices relate to the mentioned barriers. The findings will be used to propose innovations to help improve the program's success rates.

However, this study was limited to Batangas City and did not include other municipalities in the province, which may have different contexts and barriers influencing their completion rate.

The total enumeration was used herein, as the entire population served as the sample for the study. These 28 teachers, who came from the ten districts in Batangas City, represent a comprehensive understanding of the various factors that affect learner retention and completion rate.

Research design

This research employed both quantitative methods to determine the program completion rate in the division and to understand the factors influencing these rates, and qualitative data to identify ALS teachers' practices in support of retention and completion rate in ALS. According to Fleetwood (2024), quantitative research is a relevant method for collecting precise, quantifiable data that will be used to uncover trends, evaluate relationships, and gain an in-depth understanding. Meanwhile, Creswell (2014) notes that qualitative data involves open-ended information collected through interviews, focus group discussions, observations, and other documents that represent human behavior.

Research instruments

This research employed a survey questionnaire to gather comprehensive data on factors influencing the retention and success rates of learners in ALS Batangas City, as well as the existing practices teachers employ to support the retention and success of the program. According to Williams (2024), a questionnaire is a set of structured questions designed to collect specific information from the subject. These questions may cover various topics that help researchers understand the respondents' beliefs, preferences, or information. The items were scored using a Likert-type scale, with four being the highest and one being the lowest in terms of the influence of these factors on the learners' retention rate.

Meanwhile, this study used the ALS records through the Learner Information System to determine the completion rate for SY. 2024-2025. The questionnaire identified the factors that teachers agree contribute to the ALS completion rate in Batangas City, in terms of socio-economic, personal, and institutional factors, as well as academic gaps. The items were scored based on a Likert-type scale with four options, where four indicated "strongly agree" and one indicated "disagree". The researchers conducted interviews with ALS teachers in Batangas City at their respective learning centers. The teachers were given an overview of the research before conducting the interview. The answers to the questions were collated and analyzed according to the various practices teachers employ in their learning centers. Results from the questionnaire and interview served as the basis for an innovation aimed at improving the completion rate of ALS in the division.

The researchers ensured the protection of participants' rights and the confidentiality of data throughout the study. Before conducting the survey, the

researchers informed the participants about the study's purpose, procedures, and potential risks. They sought informed consent, which demonstrates their willingness to participate. Any information about the participants was treated with utmost anonymity and confidentiality and shall only be used for the benefit of the study.

Data Analysis

Both quantitative and qualitative data were systematically analyzed to identify the socioeconomic, personal, and institutional factors, as well as the academic gaps that affect the completion rate in Batangas City. The analysis included the descriptive statistics, specifically the mean, to determine the factor that teachers agree on the most.

A four-point Likert scale was used to score the responses of the respondents, with four being the highest and one being the lowest. These scores were interpreted as agree, slightly agree, slightly disagree, and disagree.

Scale	Range	Verbal Interpretation
4	3.50-4.00	Agree
3	2.50-3.49	Slightly Agree
2	1.50-2.49	Slightly Disagree
1	1.00-1.49	Disagree

Meanwhile, the researchers thematically analyzed the practices of the ALS teachers in support of the retention and completion of the ALS learners.

RESULTS AND DISCUSSION

I. ALS Completion Rate for SY 2024-2025

Table 1

Completion Rate for SY 2024-2025

Level	Enrollment	Completion	Completion Rate
Basic Literacy Program	154	80	52%
Accreditation and Equivalency Elementary	272	139	51%
Accreditation and Equivalency Secondary	1015	674	66%
Total	**1441**	**893**	**62%**

Table 1 shows the completion rate of the Alternative Learning System in Batangas City Division for SY 2024-2025. Out of 1,441 enrollees, only 893, or 62%, completed the program. It reflects the national ALS completion rate for SY 2023-2024 of 302,807 completers out of 655,517 enrollees.

II. Factors Affecting the ALS Completion Rate in the Division of Batangas City

Table 2.1

Socio-economic Factors

Socio-economic Factors	Weighted Mean	Rank	Verbal Interpretation
1. My learners cannot afford transportation, school supplies, and food.	3.25	4	Strongly Agree
2. My learners irregularly attend classes because of unstable working environments.	3.36	1.5	Strongly Agree
3. My learners transfer from one location to another due to work-related changes.	3.36	1.5	Strongly Agree
4. My learners live in overpopulated areas	3.07	4	Strongly Agree
5. My learners live in isolated areas.	2.82	7	Agree
6. My learners lack access to mobile phones and computers.	3.00	5	Agree
7. My learners are exposed to vices such as alcohol, cigarettes, and gangs.	3.29	3	Strongly Agree
8. My learners are exposed to gangs and crimes in their communities.	2.36	8	Slightly Disagree
Composite Mean	**3.06**		**Agree**

Table 2.1 presents the socioeconomic factors influencing ALS completion rate in Batangas City. The need to transfer from one location to another and irregular attendance due to unstable working environments rank first with the weighted mean of 3.36, interpreted as strongly agree. It shows that the retention and completion of ALS learners are affected by the need to prioritize work or relocate to a new work location to support their families. It relates to the study conducted by Reyes and Santos (2021), who emphasized that socioeconomic factors influence the persistence of ALS. The need to work to support themselves and their families, as well as financial constraints, are among the primary reasons for the high dropout rate in the program.

Exposure to vices such as alcohol, cigarettes, and gangs is also one of the roots of the low ALS completion rate in the division, reflected in its mean score of 3.29, interpreted as strongly agree. It highlights peer pressure as a roadblock to continuing education. Peer pressure often leads learners to drinking and smoking, affecting their interest in studying, and later causes frequent absenteeism and dropping out of school (Simpao, 2024).

Table 2.2

Personal Factors

Personal Factors	Mean	Rank	Verbal Interpretation
1. My learners lack self-motivation to pursue education.	3.50	2	Strongly Agree
2. My learners have not developed study habits and time management.	3.54	1	Strongly Agree
3. My learners lack the determination to overcome academic challenges.	3.21	5	Agree
4. My learners feel shy because of the stigma of their age.	3.11	6	Agree
5. My learners have low self-esteem because they struggle academically.	3.32	3.5	Strongly Agree
6. My learners have physical and learning disabilities that limit their class participation.	2.75	7	Agree
7. My learners have mental health concerns such as stress, anxiety, and depression.	2.50	8	Agree
8. My learners have trouble balancing family, work, and academic life.	3.32	3.5	Strongly Agree
Composite Mean	**3.15**		**Agree**

Table 2.2 explores the personal factors affecting ALS completion rate in Batangas City. Notably, ALS learners lack study habits and time management skills, as reflected in the mean score of 3.54. It indicates that ALS learners struggle with organizing their schedules to develop effective study habits. In this regard, study habits, such as budgeted study time, note-taking, and reading ability, were found to correlate with academic performance (Labrador et al., 2024). Students who employed better study habits were able to achieve higher levels of academic success. Personal motivation also plays a vital role in completing education (3.50). The results of this study show that a low personal drive to

pursue education, possibly due to a weak support system, previous negative experiences, and other factors, causes learners to drop out of schooling. Among adult learners, related research emphasized that individuals with self-efficacy are more likely to pursue education (Holmquist, 2013). In addition, the need to balance family, work, and academic life, as well as low self-esteem resulting from academic struggles, also affects learners' retention. These factors ranked third with a weighted mean of 3.32, indicating a strong agreement.

Table 2.3

Institutional Factors

Institutional Factors	Mean	Rank	Verbal Interpretation
1. There are not enough ALS learning centers in our community.	2.50	6.5	Agree
2. There is a shortage of modules and textbooks.	2.71	4	Agree
3. There is an insufficient number of ALS implementers in my area.	2.04	8	Slightly Disagree
4. Teachers find difficulty in integrating learning competencies within and across learning strands.	3.36	3	Strongly Agree
5. Teachers need training in assessment and differentiated instruction to address the needs of multi-graded learners.	3.54	1	Strongly Agree
6. There is no rigid process for validating BLP learners.	3.46	2	Strongly Agree
7. There is a lack of recognition to motivate learners to continue.	2.50	6.5	Agree
8. There is insufficient support from the local government.	2.61	5	Agree
Composite Mean	**2.84**		**Agree**

Table 2.3 illustrates the institutional factors that affect the completion rate in ALS Batangas City. Among the institutional factors influencing the completion rate of ALS learners, teachers' need for training in assessment and differentiated instruction to address the needs of multi-graded learners ranked first, with a mean of 3.54, indicating a strong agreement. It shows that teachers' instruction and skills in facilitating learning play a vital role in learner retention. Teachers who work with multi-graded learners require targeted training to cater to the

diverse needs of their learners effectively. A parallel study conducted by Martinez (2021) highlighted that ALS teachers frequently lack access to training tailored to the unique needs of non-traditional learners, which negatively impacts the quality of instruction and learner engagement.

Meanwhile, ALS teachers also recognize that a lack of a standard or formal process to assess Basic Literacy Program (BLP) learners. The respondents strongly agree that there is no rigid process in validating ALS learners, with a mean score of 3.46. Inconsistencies in validating learners show the need for a clear and structured process and guidelines.

Table 2.4

Academic Gaps

Institutional Factors	Mean	Rank	Verbal Interpretation
1. My learners struggle to decode and comprehend the text.	3.57	1	Strongly Agree
2. My learners are poor in spelling, vocabulary, and grammar.	3.50	2	Strongly Agree
3. My learners cannot construct meaningful sentences.	3.39	3.5	Strongly Agree
4. My learners struggle with fundamental operations (addition, subtraction, multiplication, division).	3.39	3.5	Strongly Agree
5. My learners are poor at problem-solving skills.	3.25	7	Strongly Agree
6. My learners have difficulty in organizing thoughts, note-taking, and summarizing ideas.	3.32	6	Strongly Agree
7. My learners have weak practical skills in solving real-life problems.	3.21	8	Agree
8. My learners have poor retention.	3.36	5	Strongly Agree
Composite Mean	**3.37**		**Strongly Agree**

Ranked third is the challenge of integrating learning competencies within and across learning strands, with a weighted mean of 3.36, indicating a strong agreement. Given the limited number of learning sessions, integration helps maximize teaching and learning. The ALS curriculum is also designed to develop functional and literacy skills, and understanding that learning strands are not

compartmentalized, prepares learners for practical use of their lessons. This finding is supported by the study of Belen and Panoy (2023), which suggests that interdisciplinary integration is significant for learners' basic science process skills and scientific attitudes. It implies that integrating science with other subjects can lead to more effective learning outcomes.

The table shows the academic gaps that affect the completion rate of ALS in the division. Fundamental literacy and numeracy skills continue to be the top academic challenges for ALS teachers and learners. Decoding and comprehension ranked first with a weighted mean of 3.57, while spelling, vocabulary, and grammar ranked second with a weighted mean of 3.50. Constructing meaningful sentences and struggling with fundamental operations shared the same rank, with a mean of 3.39, all interpreted as strongly agree. These findings align with previous studies that identified poor literacy and numeracy as significant barriers to learner progress and retention in alternative education settings (Ballesteros & Domingo, 2020).

Practices of ALS Teachers to Improve the ALS Completion Rate in Batangas City

Based on the research conducted, the following are the best practices that implementers employ to improve the ALS completion rate in Batangas City.

1. Collaboration of Expertise

In ALS Batangas City, teachers engage in collaborative expertise, specifically Professional Learning Networks and team teaching. Knowledgeable and experienced ALS implementers are better equipped to present information in a manner that is pertinent, intelligible, and sensitive to the diverse needs of various learners. Their capacity to evaluate different learning styles, modify methods, and incorporate life skills makes learning more applicable and meaningful, helping boost student motivation and lower dropout rates. The Learning Network, under the ALS Batangas City flagship program, SAGIP, is tailored to meet the needs of teachers in terms of instruction, assessment, and professional development. According to Darling-Hammond et al. (2017), teacher expertise directly influences the success of learners, especially in adult education and flexible learning. Effective teachers can establish nurturing, learner-centered environments because they possess both pedagogical and content mastery. In addition, ALS Batangas City also maximized the expertise of each teacher,

utilizing team teaching. Given the profile of the ALS teachers, where the majority are elementary teachers, teaching core subjects has been a challenge. It is addressed through collaborative or team teaching. Teachers extend their services to other learning centers, while others benchmark best practices with expert teachers. This practice is supported by the study of Friend and Cook (2016), which emphasized that team teaching improves classroom management, increases student engagement, and fosters professional development among teachers through peer observation and shared planning.

2. Life Skill Application

The Alternative Learning System nationwide incorporates life skills through modules that promote real-life applications. Modules for life skills focus on financial literacy, health awareness, livelihood, and civic engagement. These skills help learners gain not only literacy skills but also practical skills that enable them to transition to employment. According to research by De Guzman and Javier (2018), ALS students who participated in life skills training demonstrated increased independence, enhanced communication skills, and improved decision-making, all of which were crucial to their success both within and outside the classroom. Teachers can ensure that learning extends beyond academic objectives by incorporating life skills into ALS instruction. It equips students to solve real-world problems and enables them to make significant contributions to their communities. When learners understand that lessons can extend beyond the classroom, they enjoy learning and are encouraged to continue their education.

3. Home Visitation

In ALS Batangas City, home visitation is one of the most essential learning supports that teachers provide to improve retention and completion rate among learners. Through home visitation, teachers gain a deeper understanding of the learners' context, including their family situation, responsibilities, and personal and emotional struggles. It allows teachers to provide applicable assistance to help them continue studying. Moreover, this activity enables the building of relationships between teachers and learners, helping them monitor and motivate those at risk of dropping out. According to the Department of Education (DepEd, 2012), home visitation is part of ALS's learner-centered approach, ensuring that education remains accessible, flexible, and responsive to individual needs.

Furthermore, home visits often serve as a bridge between the learning facilitator and the learner's household, fostering a supportive environment that encourages continued participation in the program.

4. Flexibility in Schedule

Flexibility in schedule is also employed in ALS Batangas City. This is crucial to retention as it adapts to the diverse circumstances of ALS learners. In the ALS context, many learners struggle to commit to the rigid schedule of formal schools due to their various personal situations, such as family and work responsibilities. With the flexibility in schedule, learners can study at their own pace, reducing dropout rates due to conflicts in time and responsibilities. Research supports that flexibility is one of the key factors that encourage learner persistence in non-formal education settings. According to Dela Cruz (2020), learners are more likely to stay in the ALS program when the schedule is tailored to accommodate their personal circumstances, including their livelihood, family duties, or health conditions.

5. Use of Modules as Main Reference

ALS teachers maximize the time spent in classrooms for instruction and discussions. Meanwhile, modules are also used for continuity during asynchronous classes. These modules are designed to allow learners to study at their own pace, even without the supervision of their teachers. The use of modules tied to the flexibility in scheduling helps, especially for adult learners who are juggling work and family responsibilities, to continue their education. Belen and Panoy (2023) found that well-designed modules enhance engagement and comprehension, especially when they integrate real-life applications, activities, and clear learning objectives. This relevance to everyday life not only improves academic performance but also motivates learners to persist and complete their ALS program.

The findings of the study suggested that improving the ALS completion rate in Batangas City requires a holistic approach to address both internal and external concerns.

The provision of a structured support system, including counseling, monthly communication check-ins, wellness seminars in collaboration with the city health office, and career guidance orientation, plays a vital role in addressing challenges that affect retention and completion among ALS learners. Senator Win

Gatchalian (2025) highlighted the need for enhanced guidance and counseling programs within ALS to address the declining completion rate. He pointed out that many learners drop out due to financial constraints, the need to work, and a lack of interest, suggesting that structured support mechanisms could help mitigate these challenges.

Proposed Innovation to Improve ALS Completion Rate in Batangas City

Objective	Activities	Time Frame	Persons Involved	Output
To provide holistic support to ALS learners addressing emotional, academic, and career development needs.	Counseling Session Monthly Communication Check-ins Wellness Seminar/Activities Career Guidance Orientation	June 2025 – March 2026	Guidance Counselor ALS Teachers ALS Focal Person Education Program Specialists II	Counseling Logs Learner wellness report Career Guidance Narrative/Documentation Report on the Improvement of Learners' Attendance
To improve the competencies of ALS teachers in providing quality instruction	Professional Learning Network	August – December 2025	ALS Focal Person Education Program Specialist II ALS Teachers Resource Speakers	Documentation on the conduct of a professional learning network Enhanced Lesson Plans Crafted A&E-like assessment tool BLP Assessment Tool
To establish and maintain partnerships with	Livelihood and skills training	February – April 2025	ALS Focal Person	Signed MOA Minutes of the meeting

stakeholders to gain support for projects and activities	Stakeholders meeting and recognition	May 2025	Education Program Specialist II ALS Teachers LGU and NGO	Number of learners trained, assessed, passed, and employed Record of partner organizations
To develop contextualized and updated learning materials aligned to the learners' needs	Workshop on writing contextualized learning materials Validation of contextualized Learning Materials Finalization of contextualized learning materials		ALS Focal Person Education Program Specialist II LRMs ALS Teachers	Set of contextualized modules Validation and Pilot Tool Results of Pilot Implementation Printed and Finalized Contextualized Materials across learning strands

Additionally, capacity building for teachers, particularly through the Professional Learning Network, serves as a strategic approach to developing the instructional competencies of ALS teachers. Through the sharing of best practices and peer mentoring, teachers are updated and equipped to address the diverse needs of learners, enabling them to adapt to educational trends and challenges.

This framework also emphasizes the importance of linkages and partnerships with stakeholders. Non-governmental organizations provide livelihood skills training that learners can apply as they enter the workforce. Therefore, recognizing their contribution to the enhancement of the ALS program delivery can solidify partnership and support.

Lastly, integrating the local context into the learning materials promotes inclusivity, making the learning session more engaging, meaningful, and applicable to the daily lives of learners. Research on contextualized instructional

materials suggests that when learning resources are tailored to reflect learners' social, historical, and cultural contexts, they become more relevant, appropriate, and applicable. Such materials help learners relate to the content, thereby improving comprehension and retention (Atondo, nd).

Collectively, these innovations can contribute to a more responsive ALS program. By addressing learners' support needs, enhancing teacher competencies, engaging stakeholders, and developing contextualized learning materials, ALS can help fulfill the Department of Education's mandate for an equitable and quality education for all. Through these strategies, it is expected that the completion rate of ALS learners in Batangas City will improve.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the study, the following conclusions were drawn.

1. The completion rate of the Alternative Learning System (ALS) in the Division of Batangas City remains low, reflecting the nationwide challenge the program faces in achieving learner completion.
2. The completion rate in ALS is influenced by socio-economic factors (work, vices, lack of basic financial support), personal factors (undeveloped study habits, poor time management, low motivation and self-esteem, difficulty in balancing family and academic life), and institutional concerns (teachers' limited expertise in assessment and differentiation, absence of a strong BLP validation process, and challenges in integrating competencies). Lastly, fundamental literacy and numeracy skills remain the top academic challenges of the program.
3. To support retention and completion of ALS learners in Batangas City, teachers participate in collaborative teaching, integrate life skill application in their classes, conduct home visitation, apply flexibility in schedule, and utilize the modules as the primary reference in teaching the learning strands.
4. Counseling, regular communications, wellness programs, and career guidance can help address the personal and academic challenges of the learners. Teachers need capacity building, while stronger stakeholder partnerships and updated localized learning materials are recommended to sustain and enhance the program.

RECOMMENDATIONS

1. The Schools Division may consider strengthening the localized intervention program to track, mentor, and support ALS learners from enrollment to completion.
2. ALS teachers, ALS program specialists, and focal persons may establish comprehensive learner support mechanisms, including flexible learning schedules, clear guidelines, and a tool for validating BLP learners. To better meet the needs of diverse learners, teacher capacity-building programs on strand integration, differentiated instruction, and assessment should also be reinforced.
3. Make the best practices part of the system through formal training and replication among all ALS learning centers in Batangas City.
4. The ALS focal person and program specialists through the Curriculum Implementation Division may develop a holistic framework or refine an existing program that includes regular counseling, career guidance, and a wellness program for learners. It may also include strengthening capacity building for teachers through professional learning developments and allocating resources for the development and dissemination of updated and localized learning materials for ALS.

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INTEGRATING TECHNOLOGY AND PARENTAL SUPPORT: USING GOOGLE SITES TO ENHANCE NUMERACY SKILLS OF GRADE 3 LEARNERS IN MALITAM ELEMENTARY SCHOOL

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Abstract: This study aimed to assess the numeracy performance of Grade 3 learners at Malitam Elementary School and propose an intervention integrating technology and parental support during the school year 2024–2025. Using an action research design, the study employed pre-tests and post-tests, parent surveys, and monitoring checklists to gather data from learners and their parents. Results revealed that most pupils initially demonstrated low to developing numeracy skills, particularly in number operations and place value. The implementation of Google Sites as a digital learning platform, complemented by active parental involvement, significantly improved learners' engagement and numeracy performance. Parents also expressed positive feedback on the accessibility and usefulness of the platform. The study concluded that integrating technology with home-based support enhances learning outcomes and recommended the continuous adoption of digital tools and parent-teacher collaboration to sustain numeracy skill development among elementary learners.

Keywords: Numeracy skills, Google sites, parental involvement, technology integration, Grade 3 learners

INTRODUCTION

Numeracy remains a fundamental cornerstone of quality education and lifelong learning, yet it continues to pose a challenge among Filipino learners. In support of the Department of Education's commitment to strengthening foundational skills, Malitam Elementary School upholds the improvement of numeracy proficiency through innovative, learner-centered approaches. Guided by DepEd Memorandum No. 62, s. 2021, which encourages the use of Open Educational Resources (OERs) and digital platforms to enhance instruction, this

initiative reflects the school's proactive response to the call for technology-integrated learning and stronger home-school partnerships.

The study is grounded on the belief that numeracy development extends beyond the classroom and thrives through purposeful collaboration between teachers, learners, and parents. Many Grade 3 pupils at Malitam Elementary School have shown challenges in mastering basic mathematical concepts such as number operations, place value, and problem-solving. While teachers continuously design remediation and enrichment activities, learners' limited home support remains a key factor affecting progress. Parents, despite their willingness to assist, often encounter barriers such as time constraints, lack of instructional strategies, or uncertainty about how to effectively guide their children in mathematics.

To address this gap, the integration of digital technology offers a promising avenue for bridging classroom instruction and home learning. Google Sites, a free and user-friendly web platform, provides teachers with opportunities to create interactive and accessible learning spaces that include video lessons, printable worksheets, and guided practice activities. This tool empowers parents to participate actively in their child's numeracy journey, making learning more engaging, structured, and sustainable even beyond school hours.

The study draws upon the Universal Design for Learning (UDL) and Vygotsky's Sociocultural Theory, emphasizing that learning occurs through interaction, scaffolding, and differentiated support. It investigated how a Google Sites based platform can enhance numeracy skills among Grade 3 learners by combining digital engagement and guided parental involvement. Specifically, it aimed to: (1) assess learners' initial numeracy proficiency; (2) implement and evaluate a home-based digital intervention with parental support; and (3) develop an action plan promoting the sustained use of technology and home-school collaboration.

Through this initiative, Malitam Elementary School seeks to foster a learning culture that embraces both innovation and partnership. By empowering parents and utilizing accessible digital tools, the study aspires to strengthen numeracy instruction, narrow learning gaps, and support the holistic development of every learner toward mathematical confidence and competence.

Literature Review

Numeracy is a cornerstone of foundational learning. It supports logical reasoning, critical thinking, and problem-solving across all academic subjects. Geiger et al. (2015) emphasized that numeracy extends beyond arithmetic proficiency to include the ability to apply mathematical reasoning to everyday situations. Similarly, the Department of Education, through the *Basic Education Development Plan 2030* (DepEd, 2022), identified numeracy as a national priority, stressing the need to strengthen learners' understanding of number operations and place value in the early grades. Jordan et al. (2018) further found that children who struggle with number sense in the primary years often experience persistent difficulties in mathematics later on, underscoring the importance of early numeracy interventions.

The learning gaps in numeracy were further widened by the pandemic, as students faced inconsistent home learning experiences and limited access to quality materials. Santos and Dela Cruz (2021) observed that while parents were eager to assist their children, many encountered barriers such as lack of time, digital literacy, and instructional confidence. Carreon and Garcia (2020) noted that structured and guided learning materials can bridge this gap by helping parents reinforce lessons at home. Consistent with Epstein's (2018) theory of home-school collaboration, active parental engagement fosters higher motivation, accountability, and achievement among learners.

Technology has become an essential tool in addressing these challenges. Studies show that digital platforms enhance engagement, comprehension, and accessibility in mathematics instruction. Clark-Wilson et al. (2020) and Hegedus and Moreno-Armella (2021) found that interactive learning environments deepen conceptual understanding and encourage active participation. In the Philippine setting, Luna and Rivera (2023) reported that low-cost online platforms, such as Google Sites and Google Classroom, improved both learner participation and parental collaboration during remote learning. DepEd, through *DepEd Memorandum No. 62, s. 2021: Creation of the Technical Working Group for Open Educational Resources (OERs)*, has also encouraged the use of open-access technology to enrich instruction, particularly in schools with limited resources.

This study is anchored on the Universal Design for Learning (UDL) framework, which emphasizes accessibility, flexibility, and engagement for diverse learners, as outlined by CAST (2018). It also draws upon Vygotsky's (1978) Sociocultural Theory, which highlights learning as a social process enhanced

through guided interaction. Similarly, Wood et al. (1976) introduced the concept of scaffolding, wherein learners progress from guided to independent mastery with appropriate instructional support. Together, these frameworks affirm the value of technology-mediated and parent-supported learning in numeracy development.

Synthesis

The reviewed studies highlight numeracy as a foundational skill essential for lifelong learning. Evidence supports that early interventions, strengthened parental involvement, and technology integration can significantly improve learners' mathematical understanding. Guided by national education priorities and DepEd policies promoting digital learning, this study introduces a Google Sites based numeracy program designed to enhance engagement and foster collaborative learning between home and school. By integrating technology and parental support, the initiative seeks to contribute to the continuous improvement of numeracy instruction among elementary learners.

Research Questions

This study aimed to determine the effectiveness of a Google Sites–based platform with structured parental guidance in enhancing the numeracy proficiency of Grade 3 learners at Malitam Elementary School.

Specifically, it sought to answer the following research questions:

1. What is the current level of numeracy proficiency among Grade 3 learners at Malitam Elementary School prior to the intervention?
2. How can a Google Sites platform be developed to support numeracy instruction aligned with the Grade 3 curriculum and accessible for learners and parents?
3. What is the effect of using the Google Sites platform, with structured parental guidance, on the numeracy performance of Grade 3 learners?
4. What are the observed experiences and challenges of learners and parents in using the Google Sites platform as a tool for home-based numeracy learning?

METHODOLOGY

The participants of the study included selected Grade 3 learners of Malitam Elementary School, along with their parents or guardians who served as co-respondents for home-based learning activities. The materials used consisted of standardized numeracy pretests and posttests validated by the Schools Division Office, a parental involvement survey, weekly monitoring checklists, and the Google Sites platform developed as the primary digital intervention tool. The procedures followed the construction and validation of instruments, creation of the digital platform, orientation of participants, administration of tests, and weekly monitoring of engagement and progress. Ethical procedures were strictly observed, including securing informed consent from parents, ensuring voluntary participation, protecting the confidentiality of responses, and upholding anonymity in data reporting.

In the Preparation Stage, the researcher conceptualized the study framework and ensured its alignment with the objectives of the school's numeracy enhancement initiatives and the *Basic Education Development Plan* (DepEd, 2022). Essential research documents, including consent forms and pretest and posttest instruments, were prepared and validated. The sampling process was also conducted during this phase. Using Slovin's formula with a 5% margin of error and a 95% confidence level, 122 Grade 3 learners were selected from a total population of 175 across six sections through proportionate stratified random sampling. The parents or guardians of these learners were also identified as co respondents to participate in home-based learning activities.

The Development Stage focused on the design and creation of the Google Sites platform, which served as the primary digital intervention tool. The site was structured to include interactive lessons, step-by-step tutorials, printable worksheets, and parent-friendly guides aligned with the Grade 3 Mathematics Most Essential Learning Competencies (MELCs). During this phase, the researcher coordinated with Grade 3 teachers to review the content for instructional appropriateness and usability. Adjustments were made to ensure accessibility, learner engagement, and parental comprehension, particularly for households with limited digital experience.

The Implementation Stage involved the actual application of the Google Sites intervention over a seven-month period. Learners and their parents were oriented on how to navigate the platform and complete weekly numeracy activities together. Data were gathered through pre-tests and post-tests, parent surveys,

and observation checklists to evaluate the learners' performance and engagement. The implementation process was continuously monitored by the researcher and Grade 3 teachers to ensure consistency, reliability, and active participation throughout the study.

Research design

This study adopted an action research design to address classroom challenges and improve numeracy skills among Grade 3 learners. Pretests and posttests were used to quantitatively measure learners' improvement in numeracy, while surveys and observation checklists gathered qualitative information from parents and teachers regarding engagement, participation, and experiences during the intervention. Together, these tools allowed the researcher to systematically evaluate both the learners' performance and the effectiveness of the Google Sites–based numeracy program in supporting home–school collaboration.

The action research approach was chosen to enable the researcher to plan, implement, and evaluate an innovation directly within the school context, fostering evidence-based instructional improvement. This design aligns with DepEd Order No. 39, s. 2016, which supports teacher-led research initiatives that aim to address classroom-based challenges and enhance learning outcomes.

The combination of quantitative data for measurable outcomes and qualitative insights for contextual understanding allowed the researcher to capture both the effectiveness and the experiential value of integrating Google Sites with parental involvement in promoting numeracy development among Grade 3 learners.

Research instruments

Three key instruments were utilized in this study to gather both quantitative and qualitative data regarding the implementation and effectiveness of the Google Sites–based numeracy intervention. These tools were designed to measure learners' numeracy proficiency, assess parental involvement, and monitor engagement throughout the program.

The Standardized Numeracy Pre-Test and Post-Test served as the primary instruments for determining the learners' level of numeracy proficiency before and after the intervention. The test, prescribed by the school and validated by the Schools Division Office of Batangas City, consisted of items that assessed basic

arithmetic operations, number sense, place value, and simple problem-solving skills. Administering the same instrument in both phases ensured consistency and comparability of results, allowing the researcher to accurately measure learning gains and the intervention's effectiveness.

Complementing this, a Parental Involvement Survey was developed to gather measurable data on the extent and nature of parents' participation in supporting their child's at-home numeracy learning. This survey provided numerical and structured information that complemented the pretest and posttest results, allowing the researcher to systematically analyze parental engagement and its impact on learners' performance.

To ensure the fidelity of implementation, a Weekly Monitoring Checklist was employed by the Grade 3 teachers. This instrument tracked learner engagement, task completion, and parental participation in weekly numeracy activities. It also served as a feedback mechanism for teachers to document observations and ensure that learners were consistently participating in the assigned digital and home-based tasks.

Through these instruments, the study ensured that the data collected were both accurate and comprehensive, reflecting authentic classroom practices and home-learning conditions. This methodological rigor strengthened the credibility of the findings and provided a solid foundation for assessing the impact of technology-supported parental involvement on learners' numeracy performance.

Data Analysis

The data collected in this study were systematically analyzed in alignment with the research objectives and the action research design.

For the first research question, "What is the current level of numeracy proficiency among Grade 3 learners at Malitam Elementary School prior to the intervention?", learners' pretest scores were examined using mean, standard deviation, and frequency distribution. Results showed a mean score of 58.3 out of 100, with a standard deviation of 12.5, indicating that most learners were at the Beginning to Developing levels of numeracy proficiency.

The second research question, "How can a Google Sites platform be developed to support numeracy instruction aligned with the Grade 3 curriculum and accessible for learners and parents?", was assessed using weighted mean from parent and teacher ratings on usability, accessibility, and instructional alignment. Ratings ranged from 3.5 to 4.7 on a 5-point scale, with an overall

weighted mean of 4.2, suggesting that the platform was perceived as highly usable and well-aligned with the curriculum.

For the third research question, "What is the effect of using the Google Sites platform, with structured parental guidance, on the numeracy performance of Grade 3 learners?", posttest scores were compared to pretest scores. Learners' posttest results showed a mean score of 82.6, with a standard deviation of 10.1, reflecting a mean gain of 24.3 points. This indicated that approximately 83% of learners demonstrated measurable improvement in numeracy skills after the intervention.

Finally, the fourth research question, "What are the observed experiences and challenges of learners and parents in using the Google Sites platform as a tool for home-based numeracy learning?", was analyzed using narrative and thematic analysis of survey responses and observation checklists. Common themes included increased learner engagement, improved parent confidence in supporting learning, and challenges such as limited internet access (reported by 28% of respondents) and time constraints among working parents (21%).

This approach provided a clear and comprehensive understanding of learners' numeracy performance, the effectiveness of the Google Sites platform, and the practical experiences of parents and learners in supporting home–school collaboration.

RESULTS AND DISCUSSION

The pretest scores were analyzed to determine the learners' baseline numeracy proficiency. Results revealed a mean score of 58.3 out of 100, with a standard deviation of 12.5, indicating considerable variability in performance. Frequency analysis showed that 62% of learners were at the Beginning level, 25% at Developing, and only 13% at Approaching Proficiency. These findings indicate that most learners struggled with basic number operations, place value, and simple problem-solving tasks, highlighting the need for a structured intervention to improve numeracy performance. This baseline aligns with prior studies emphasizing early intervention in foundational numeracy skills, as gaps in number sense can affect future mathematical learning (Jordan et al., 2018).

To address these gaps, the Google Sites platform was developed as an interactive and accessible learning resource aligned with the Grade 3 Mathematics curriculum. Parent and teacher feedback collected through a survey using a 5-point Likert scale resulted in an overall weighted mean of 4.2, with

ratings on usability ranging from 3.5 to 4.7. These responses suggest that the platform was easy to navigate, materials were clear, and instructional content was effectively aligned with curriculum objectives. Teachers noted that the platform facilitated consistent monitoring of learner progress, while parents highlighted that the step-by-step tutorials and downloadable resources helped them support their children effectively. These results confirm that carefully designed digital tools can bridge classroom instruction and home learning, particularly when parents are guided on how to facilitate activities (DepEd, 2021).

The impact of the intervention on learners' numeracy performance was assessed by comparing posttest scores with pretest results. Learners achieved a mean posttest score of 82.6, with a standard deviation of 10.1, reflecting a mean gain of 24.3 points. Analysis showed that 83% of learners demonstrated measurable improvement, with many progressing from Beginning or Developing levels to Approaching Proficiency and Proficient levels. Gains were especially notable in number operations and problem-solving tasks. These results indicate that combining a structured digital platform with parental support positively affects learners' engagement, motivation, and numeracy outcomes, supporting evidence that home–school collaboration enhances learning effectiveness (Rivera, 2022).

Observations from parent surveys and teacher checklists also revealed key experiences and challenges in using the Google Sites platform. Parents reported increased confidence in supporting their children, noting that tutorials and downloadable materials facilitated engagement in learning activities. Learners demonstrated higher engagement, greater independence, and improved persistence in solving mathematical problems. However, challenges such as limited internet access (reported by 28% of respondents) and time constraints due to work or household responsibilities (21%) were also noted. These findings underscore the importance of considering contextual factors in technology-assisted interventions and highlight the need for alternative strategies, such as offline resources or flexible activity schedules, to ensure equitable participation (Reyes, 2022).

The study demonstrates that the Google Sites–based intervention, supported by structured parental involvement, effectively improves numeracy skills among Grade 3 learners. The observed improvements in pretest to posttest scores, coupled with positive parental and teacher feedback, confirm that digital platforms can enhance engagement, facilitate home–school collaboration, and

address foundational learning gaps. Addressing challenges related to accessibility and time constraints will further strengthen the effectiveness and inclusivity of future implementations.

CONCLUSION AND RECOMMENDATIONS

The findings of the study reveal that prior to the intervention, the majority of Grade 3 learners at Malitam Elementary School demonstrated low to developing numeracy proficiency, particularly in number operations, place value, and problem-solving tasks. The pretest results, with a mean score of 58.3 and a standard deviation of 12.5, indicate that foundational numeracy skills required immediate and structured support.

The development and implementation of the Google Sites platform addressed this need by providing interactive lessons, step-by-step tutorials, printable worksheets, and parent-friendly guides aligned with the Grade 3 Mathematics curriculum. Feedback from parents and teachers, with a weighted mean rating of 4.2, confirmed that the platform was user-friendly, accessible, and effectively aligned with instructional objectives. This demonstrates that a well-designed digital learning environment can serve as a practical tool to support both classroom instruction and home-based numeracy practice.

The intervention's effect on learners' numeracy performance was significant. Posttest results showed a mean score of 82.6, representing a mean gain of 24.3 points, with 83% of learners demonstrating measurable improvement. Many learners progressed from Beginning or Developing levels to Approaching Proficiency or Proficient levels, showing that structured digital interventions combined with parental guidance can enhance engagement, motivation, and learning outcomes in numeracy.

Observations and thematic analysis of parental surveys and teacher checklists revealed that parents gained confidence in supporting their children, and learners showed increased independence and persistence in solving math problems. Challenges were identified, including limited internet access for some households and time constraints among working parents, highlighting the need to consider contextual barriers in future implementations.

Based on these findings, it is recommended that schools continue using Google Sites or similar digital platforms for home-based numeracy learning, ensuring alignment with the Grade 3 curriculum and including interactive, parent-friendly resources. Regular orientations and training sessions for parents

should be conducted to strengthen their ability to guide children effectively. Additionally, offline or low-bandwidth versions of digital activities should be provided to ensure equitable participation. Structured monitoring systems, such as weekly checklists and feedback forms, should be maintained to track learner progress and parental involvement systematically. Teachers are also encouraged to engage in collaborative reflection and planning to refine instructional strategies and sustain the positive impact of the digital intervention.

Overall, this study demonstrates that aligning digital tools with parental support, structured learning activities, and systematic monitoring can significantly enhance numeracy proficiency among Grade 3 learners. By addressing accessibility challenges and maintaining home–school collaboration, schools can foster long-term mathematical confidence and competence in early learners.

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OPTIMIZING RESEARCH: INTENSIFYING STUDENTS' RESEARCH SKILLS THROUGH SCIMATH INTEGRATION

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Abstract: This study primarily aimed to optimize research by intensifying the students' research skills through SciMath integration. It highlights a comprehensive view of 91 learners on their level of research skills and influence of Science and Mathematics in the development of those skills. A mixed-method approach was utilized and self-made questionnaires were distributed to select respondents, and data were analyzed through descriptive statistics and thematic analysis. The findings discovered that students showed an excellent level in identifying research problems (3.30) while formulating hypotheses (3.09), analyzing data using SciMath tools (3.12), and drawing conclusions and presenting findings (3.23) were rated as Good. Additionally, students strongly agreed that the integration of Science and Mathematics significantly enhances their research skills (3.37). However, challenges still occurred such as application of mathematical formulas and understanding theoretical concepts. The findings demonstrated that learners have a strong and solid foundation in research skills, but there is a need for further support and enhancements to uplift their performances in research.

Keywords: optimizing research, research skills, SciMath integration

INTRODUCTION

Research is one of the special additional subjects to the basic courses in the junior high school Science, Technology, and Engineering (STE) program. This is in response to the initiative of the Department of Education in promoting science and mathematics education in the country as support to the Republic Act No. 2067 also known as "The Science Act of 1958" which was created to integrate, coordinate, and intensify scientific technological research and development and to foster invention, including the provisions of funds and other purposes.

Batangas City Integrated High School as implementer of the Program caters Research in all grade levels under the STE program.

High school students are learning the fundamental steps of research so that they may improve their scientific abilities and critical thinking at a young age by applying scientific knowledge to practical applications, testing theories, and coming up with novel ideas through experimental discoveries in innovations that might advance science and technology. To assess the performance of the students in research, Delgado (2023), the lead author of this paper, conducted the study on the "Research Writing of the STE students in Batangas City Integrated High School", where the difficulties encountered by the students in accomplishing every section of the research paper were highlighted. Findings revealed that the level of difficulties in accomplishing Chapter I was high or moderately difficult on "finding the topic for study (2.60), creating theoretical framework (2.30), and creating conceptual framework (2.10)." Likewise, in accomplishing Methodology, the students specifically noted that the level of difficulties were high on "choosing the appropriate statistical treatment of data (2.33)", followed by collecting data (2.33), and finding materials and designing the procedures of the experiment (2.30)." These findings were conforming with the observations and comments of the panelists during the research congress, that many of the studies presented by the students were lacking or had a weak statistical analysis of the data. Despite the presence of the STE program, research outputs show gaps in SciMath application. Many students particularly at the lower grades find it difficult to see the relationship of data to the research questions and what correct methodologies and statistical measures will be fitted to treat the identified problems. The lack of sufficient knowledge in mathematics is a big challenge to the students on how mathematical formulas and statistical measures can be appropriately applied, resulting to misinterpretations and weak conclusions.

These findings and observations had moved the lead researcher to consult and collaborate with the experts in mathematics and science to further study the identified problems and work together in intensifying the research skills of the students. Additionally, it has been observed that guided or integrated approaches to research are more explored in senior high school, but little research has been done on SciMath integration specifically within the junior high school STE program**.** Furthermore, existing literature focuses on general research challenges, but few studies measure the actual influence of SciMath integration on developing

research skills**.** Moreover, there are no documented study in SDO Batangas City has yet evaluated how SciMath affects the analytical and methodological competencies of STE learners.

Utilizing the integrative approach of relating or connecting science and mathematics, SciMath, will significantly enhance and intensify the research skills of the students where they can be encouraged to improve problem solving skills, critical thinking, analytical skills, and motivating them to increase drive and engagement in both subjects.

Literature Review

Difficulties Encountered by Students in Research

Research may not be the favorite subject of many students in junior high school as it requires a lot of work, strong dedication, patience, and perseverance. Hence, many students think and perceived difficulty of the research process. Students face challenges in many aspects beginning from choosing suitable topic of investigation, conceptualizing the topic or subject of the study, formulating problems, hypotheses, choosing the right methodology, how to collect, process data, analyze, and interpret. Samante (2023) in her study revealed that the senior high school students found difficulty in conceptualization, formulation of the research problem, identification of methodology, and data analysis. In a similar study, Jimenez (2024) came to the conclusion that student-researchers encountered similar challenges in research writing across various sections of the manuscripts. Advisers need to consider both internal and external elements that contribute to research challenges, students' differing levels of difficulty demonstrated that writing poses significant problems for students with varying backgrounds or experience levels.

Students' readiness to face these challenges in undertaking any research investigation is important to enable them produce a quality output and prepare themselves for college thesis writing. Thus, the researchers determine the level of research skills of the students. According to the International School Ho Chi Minh City (2025) in its article posted in August, finding, analyzing, organizing, and presenting material are all part of a student's research skills. Effective questioning, discovering trustworthy sources, taking notes, data analysis, summarizing results, and presenting them are a few of these. Students with research skills are better equipped to think for themselves, solve problems with assurance, and interact with the environment. These abilities have an impact on

how young students investigate material, pose questions, and assess their findings. Early development of good research skills makes learners stand out both academically and personally in today's information-driven environment. Due to the lack of experience, the junior high school students may not have yet developed a strong level of research skills such that many students struggle in research.

Tabafa and Sariana (2025), specifically mentioned in their study on "Examining the Relationship between Attitude towards Research and Research Skills Development among Junior High School STE Students", that even though the STE curriculum incorporates research, many junior high school students still have difficulty honing their research skills. Students always ask how a new subject relates to their present and future lives when it is taught to them. When it comes to research, its significance as a topic is clear.

Influence of Science and Math in Research

Science and math are integral tools in research to develop ideas, create models, analyze data, design methods in scientific, logical and organized way. However, students encounter difficulties when conducting research mostly because they lack basic understanding of statistics, they are not so familiar with the mathematical formulas and statistical tools that should be used in treating the collected data. Due to this, they failed to connect ideas to actual data and find it difficult to interpret findings in relation to their research topics. The application of scientific principles and methods combine with the knowledge in mathematics are essential to finding the solutions to the investigated problems. Hence, integration of science and mathematics is essential in conducting research.

According to Ali and Bhaskar (2016) the statistical analysis breathes life into a lifeless set of data by giving meaning to the meaningless numbers. Only when appropriate statistical tests are applied are the findings and conclusions accurate. The study of Sabasaje and Oco (2023) strengthened these findings where the latter study revealed that mathematical skills showed significant correlation on Reasoning which implied that developing students' mathematical reasoning can have a significant impact on their overall critical thinking ability. Additionally, there was a strong correlation between mathematical abilities and problem-solving ability. This suggests that the students' performance in mathematics is significantly correlated with their mathematical skills and mathematical ability to solve problems. Solving mathematical problems promotes the development of one's ability to think critically, creatively, and logically which

are essential skills in research. The ability to solve problems is a crucial skill that everyone should have. Through problem-solving in mathematics, students learn how to apply their mathematical knowledge and skills to real-world issues. Word problems, which combine applications and real-world problems, are one of the fundamental elements of mathematical problem-solving.

Servado (2024) on her study on the level of scientific research skills of senior high school students concluded that the students' scientific research skills are greatly influenced by how they process and manage the data. There is a strong correlation between the students' scientific research skills and academic performance. Accordingly, the students scientific research skills improve their academic performance particularly in science. Further to this, Mirana (2023) in her study noted that grade 10 students have positive attitude towards science. However, it was also revealed that the positive or highly positive attitudes from 10 out 15 statements did not convert into a well-developed science process skill because a positive attitude in studying science is necessary for students to more effectively develop these abilities. Findings implied that teachers, who are crucial in shaping students' attitudes and abilities, exhibited a clear picture of the differences on how science is experienced by the students both within and outside of the classroom. The study's findings also supported the necessity of teaching science in a variety of ways to foster students' appreciation of the subject and improve their abilities.

Moreover, Ningtyas et.al (2024) in their study pointed out that it has been demonstrated that the integration of STEM is successful in improving the abilities and skills of the students.

Synthesis

Many high school students face considerable difficulties in acquiring the abilities required for successful research writing, according to numerous studies. These challenges range from the first stages of the research process, like problem creation and topic conceptualization, to methodological selection, data processing, and interpretation. These findings emphasize the necessity of teaching strategies that take into consideration the internal and environmental elements influencing students' challenges with research. Students' preparedness and degree of research proficiency become crucial in light of these difficulties.

Overall, the surveyed studies support the notion that improving students' research abilities necessitates both meaningful integration of science and

mathematics and direct training in research procedures. Students' conceptual knowledge, data analysis skills, and logical, evidence-based thinking are all improved by this kind of integration. Therefore, maximizing research education through the integration of science and math may be an essential tactic for strengthening students' research abilities and getting them ready for challenging coursework.

Research Questions

The following research questions were set to answer.

1. What is the existing level of research skills among Grade 10 STE students of BCIHS in terms of:
   1.1. Identifying research problems;
   1.2. Formulating hypotheses or research questions;
   1.3. Interpreting and analyzing data using mathematical and scientific tools;
   1.4. Drawing conclusions and presenting findings?
2. How does the integration of Science and Mathematics concepts intensify the development of students' research skills?
3. What challenges do students encounter when applying Science and Mathematics learning on their research undertakings?
4. In line with this integrative approach of Science and Mathematics in Research, what activities or strategies will effectively and efficiently improve the students' research skills?

METHODOLOGY

This research was conducted to optimize junior high school research by intensifying the students' research skills through SciMath integration. To enable researchers attain this goal, a careful planning and preparation were made. Participants to the study were selected from the grade 10 junior high school students who had taken research subjects under the STE program in Batangas City Integrated High School. The sample were taken using *Raosoft* calculator from 118 total population with 955 confidence level. A survey questionnaire was prepared, validated, and administered to the select 91 STE G10 students. In determining the research skills and SciMath integration, descriptive statistics was utilized. Thematic analysis was used for identifying the challenges

encountered and possible recommendation from the learners. Data gathered from these research instruments were presented in tables, analyzed, and interpreted.

Research design

Mixed method approach or combination of quantitative and qualitative research designs is used in this study. Self-made questionnaires were administered to students to evaluate the research skills and integration of math and science in research. Focus Group Discussions (FGDs) and open-ended questions were also added to identify the challenges they experienced in integrating math and science in research. Self-made questionnaires were transformed into google form to easily gather the data. The data gathered were tabulated and analyzed using statistical analysis such as Cronbach's alpha value for the reliability and weighted mean for identifying the findings.

Research instruments

To collect the needed information regarding the focus of the study, the survey questionnaire was designed, validated, and administered to the target respondents. The questionnaire contains open-ended questions and composed of four parts. Part I includes the level of the research skills of the students in terms of: (1) identifying the research problem, (2) formulating hypotheses or research questions, (3) analyzing data using SciMath tools, and (4) drawing conclusions and presenting findings. Part II contains the SciMath influences in research. Part III includes the challenges encountered by the students in applying science and mathematics learning in research. Part IV contains the suggestions for supporting research learning using math and science. The questionnaire was validated prior to its administration. This was done to ensure that the instrument is free from errors, all the questions cover the content of the study, and the questions are made sure to be appropriate for the intended respondents. Moreover, the questions can be enhanced or revised, if necessary, before being sent to the respondents.

In addition to the questionnaire, descriptive statistics was utilized in determining the research skills and SciMath integration. Thematic analysis was used for identifying the challenges encountered and possible recommendation from the learners.

Data Analysis

After collecting the data from the respondents, every piece of data was used in this study using descriptive statistics. With this process, the research skills and the influence of SciMath integration in intensifying the development of students' research skills were carefully determined and analyzed. On the other hand, thematic analysis was employed to identify the challenges when applying science and mathematics learning on their research undertakings. Thematic analysis's adaptability makes it possible to describe the data in a rich, intricate, and sophisticated way.

The information obtained from the respondents was handled with the highest confidentially in order to provide a significant and useful contribution to the study.

Responses were collected, tabulated, analyzed, and interpreted by subjecting data to statistical measures such as weighted mean.

RESULTS AND DISCUSSION

After a thorough analysis of the data, findings revealed that with regards to the level of research skills of the students in terms of identifying research problems, students can relate the research problem to real-life concern. This showed the highest weighted mean of 3.52 and a verbal interpretation of excellent. There is an importance of identifying research problems, as they are needed to prepare students for global demand and 21st century skills (Zahro et al., 2024). However, statement no. 2, "I understand how to formulate a clear research problem," had the lowest weighted mean of 3.08. This has a verbal interpretation of Good. In the level of research skills, identification of research problems is important, and therefore, according to Madhu et al., (2024), to define a problem accurately, the researcher must understand the nature of what constitutes a problem. One must start with a broad understanding, and then narrow down by analysis and consideration of feasible research methods, which leads to a specific and focused question. Madhu et al. (2024) states that identification of the research problem requires a maintenance of a rational and manageable approach and proper evaluation of its practicality. These findings directly answer the Research Question 1.1 that focuses on determining the level of research skills of the students in terms of identifying research problems.

Another determining factor of the level of research skills of the students is the ability of the students to formulate hypotheses or research questions

(Research Question 1.2). It can be noted from the findings that students are good in differentiating research question from a research hypothesis and can make hypothesis an educated guess or hypothesis based on facts which has the highest weighted mean. This means that upon self-assessment, the respondents' skills in formulation of hypothesis or research questions are developed enough. Vieno et al. (2022) stated that there are different ways to develop such research skills such as through thesis and non-thesis-based programs. Meanwhile, the statement, "I can write a focused and researchable question," had the lowest weighted mean. While it is interpreted as Good it meant that it is not sufficient enough and that people across all career stages may find developing research problems struggling according to Covvey et al. (2023). These findings highlighted the answers to Research Question 1.2. In summary, the table shows that there is a good assessment with regards to formulation of hypotheses or research questions. In summary, the table shows that there is an excellent assessment with regards to identification of research problems.

Analyzing data using SciMath tools is another factor that determines the level of research skills of the students. Findings showed that there is an excellent assessment with regards to analysis of data using SciMath tools. Students responded that they can organize collected data using tables or graphs. This research skill can be developed through not only countless laboratory testing and but also through other environments such as through class presentations or independently working on projects (Zahro et al., 2024). However, students responded the least that they can apply scientific and mathematics principles in analyzing research results, although verbally interpreted still at good. Nair (2024) stated that there is an intertwining relationship between mathematics and other scientific fields. Mathematics is not merely a tool but also a fundamental scientific language and therefore essential for scientific progress and understanding the universe. To create a study, one must have sufficient mathematical and scientific skills. The above findings directly answer Research Question 1.3 on determining the level of research skills of the students in terms of analyzing data using SciMath tools. In summary, the table shows that there is an excellent assessment with regards to analysis of data using SciMath tools.

Students were also assessed on their skills in drawing conclusions and presenting findings. Survey revealed that students are aware of the limitations of their study. Knowing the limitations of the study is important as awareness of common pitfalls when composing researches can help avoid issues that may not

otherwise be discovered until the manuscript undergoes peer review (Covvey et al., 2023). Students however responded the least that they are confident in presenting their findings using visual aids. While there are different ways to present findings, more often than not it is easier to present the raw data into simpler presentations such as graphs or tables. However, graphic representations or frameworks, when implemented correctly, can become powerful tools in explanation of research processes and outcomes (Waller, 2022). The above discussions directly answer the Research Question 1.4 on determining the level of research skills of the students in terms of drawing conclusions and presenting findings. In summary, the table shows that there is a good assessment with regards to drawing conclusions and presenting findings.

When it comes to the integration of science and mathematics concepts in intensifying the development of students' research skills, students strongly agreed that with science and mathematics having a strong influence on research-making. They specifically emphasized that the utilization of basic knowledge in mathematics on creating and plotting graphs improves their skills on data presentation. The result was also in line with Nair (2024), as they stated that "mathematical modeling significantly enhances predictive capabilities in fields such as epidemiology, where understanding disease spread relies heavily on differential equations". Furthermore, mathematical techniques such as statistical mechanics help illustrate particle behavior, which can help researchers develop more innovative materials and drugs. Meanwhile, it ranked last on their responses that the application of fundamental mathematical operations in the conduct of experiments helps me construct a logical and systematic procedure or a well-defined research methodology," had the lowest weighted mean of 3.31. This has a verbal interpretation of Strongly Agree. According to Nair (2024), fields such as biology or physics use mathematical principles to model real-world phenomena. Mathematical principles such as statistics, geometry, and calculus often provide logical structure and clarity, and guide scientific reasoning. In research-making, the integration of mathematical principles helps contribute to advance knowledge and more profound understanding of principles and methodologies (Nair, 2024). These findings directly answer Research Question 2 with regards to the influence of SciMath in Research. In summary, the results show that respondents strongly agreed with science and mathematics having a strong influence on research-making.

On the other hand, using thematic analysis on identifying the challenges encountered by the students in applying science and mathematics learning in research, findings showed that the dominant theme is difficulty in applying mathematical concepts and formula since the learners are struggling with remembering and applying an appropriate formula in their research. It was followed by limited understanding on the concepts of Science and Math that could be beneficial in their study like different theories that can be applied. The third challenge is the difficulty of choosing an appropriate statistical tool in their research and difficulty in interpreting the data. Discussion above highlighted the answers to Research Question 3 regarding the challenges the students encountered in applying mathematics and science learning sin research. These challenges are the bases to help the students integrate easily science and mathematics in their research undertakings.

Based on the responses, students identified several suggestions or recommendations that can be applied by the teachers to better the students on their research learning using Math and Science. First in making abstract concepts easy to understand, the teachers should give more emphasis the importance of connecting lessons to real-life applications. Some respondents expressed that to enhance their motivation and deepen their comprehension there should be an application of solving real-world problems. Second, they emphasized the importance of hands-on activities like experiments, data analysis, and simulations, which permit them to enthusiastically pertain their learning in meaningful ways. Third, students distinguished the need for clearer teaching on how to properly use mathematical formulas, statistical tools, and technology like Excel and different statistical online application. Second to the last, they favored on interactive and game-based and visual-based instructions—such as games, visual aids, and engaging group activities—which make learning more enjoyable and memorable. Lastly, to build their confidence and receive a support for their learning progress, teachers should allocate guidance, consistent monitoring, and constructive feedback.

Generally, these recommendations can create an active, supportive, and context-rich environment in developing learners' research skills through Math and Science.

CONCLUSION AND RECOMMENDATIONS

The findings from this study highlight a comprehensive view of students' existing level of research skills and the influence of Science and Mathematics in the development of those skills. Among the different domains of identifying research problems, formulating hypotheses, analyzing data using SciMath tools, and presenting findings, students generally regarded their skills as "Good" to "Excellent." Predominantly, they established strong ability in relating research problems to authentic real-life situations and establishing data using visual representations such as tables and graphs. However, other indicators such as formulating precise research questions and applying complex mathematical and scientific principles in data analysis still need to strengthen.

Also, students strongly recognized the importance of integrating Science and Mathematics in research activities. The influence of these subjects was especially evident in data collection, methodology construction, data presentation, and interpretation. This approves the vital role of SciMath concepts in creating logical, evidence-based, and systematic research outputs.

In summary, it is then concluded that (1) the students existing level of research skills ranges from good to excellent, (2) the integration of science and mathematics intensifies the development of students' research skills, (3) the dominant theme in the challenges encountered by the students in applying science and mathematics learning in research-making includes difficulty in applying mathematical concepts and formula, limited understanding on the concepts of Science and Math that could be beneficial in their study like different theories that can be applied, and difficulty of choosing an appropriate statistical tool in their research and difficulty in interpreting the data.

As concluded, learners have a strong and solid foundation in research skills, but still there is a need for further support and enhancements to uplift their performances mathematically and analytically. Considering these findings, it is recommended that teachers can empower learners to become more ready, competent, accurate, and research-oriented thinkers who are ready to tackle real-world problems with scientific and mathematical skills through integrating applicable, engaging, and well-guided strategies in teaching. Secondly, notwithstanding these strengths, challenges still occurred such application of mathematical formulas, hence, understanding theoretical concepts, and selecting appropriate statistical tools must be look into. These matters should be considered so that the need for targeted interventions to bridge gaps in

comprehension is given emphasis. Lastly, the students proposed various actionable suggestions should be taken into consideration as well. Rea-life applications, hands-on activities, and clearer instruction in formulas and tools should be given focus in instruction. Interactive teaching strategies and guidance from teachers were also identified as an essential part in building their confidence and skill in research.

Furthermore, the researchers also recommended a continuity of the study and expansion of its coverage through an action plan entitled Project S.M.A.R.T (Science and Mathematics Advancement in Research Techniques)

Area of Improvement	Objectives	Strategies /Activities	Persons Involved	Time Frame	Expected Outcome
1. Difficulty in formulating clear research questions	Improve students' ability to write focused, researchable questions	- Conduct workshop on research problem formulation- Use real-life examples and guided practice	Research teachers, SciMath teachers	1st Quarter	Students can formulate clear and researchable questions
2. Limited application of SciMath in data analysis	Enhance students' data interpretation and statistical skills	- Conduct hands-on training using Excel/SPSS /Google Sheets- Integrate SciMath tools in research classes	Math and Science teachers, ICT coordinator	1st–2nd Quarter	Improved use of SciMath tools for organizing and analyzing data
3. Difficulty using appropriate statistical tools	Improve understanding of statistical tools and	- Simplified guide on statistical tools- Simulation activities	Research teachers, Math teachers	Continuous (Monthly sessions)	Better selection and application of statistical tools

	when to apply them	and visual aids			
4. Weak data presentation and conclusion skills	Strengthen students' skills in presenting and concluding their findings	- Train students on using tables, graphs, and infographics - Introduce Waller's graphical framework	Research teachers	3rd Quarter	Clearer, more effective presentation of research findings
5. Lack of student confidence and engagement	Increase learner engagement and confidence in applying SciMath in research	- Conduct interactive class activities and gamified learning-Provide consistent feedback and mentoring	All subject teachers	Whole Year	Improved motivation and research confidence

Moreover, more studies in future could be made on strengthening the SciMath integration in enhancing and intensifying the research skills of the junior high school students across all grade levels and/or in both junior and senior high school levels.

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PAGTUTURO NG FILIPINO 7 SA SANGAY NG LUNSOD BATANGAS: BATAYAN SA PAGBUO NG KAGAMITANG PANG-INTERBENSIYON

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Abstrak: Layunin ng pag-aaral na ito na suriin ang antas ng kasanayang pampagkatuto ng mga mag-aaral sa Filipino 7, ang mga estratehiyang ginagamit ng mga guro sa pagtuturo, at ang mga suliraning kinahaharap sa implementasyon ng aralin upang makabuo ng angkop na kagamitang pang-interbensiyon. Gumamit ng deskriptibong disenyo at sinuri ang datos sa pamamagitan ng weighted mean. Ipinakita ng resulta na ang lahat ng kasanayang pampagkatuto ay "Natatalakay," na may composite mean na 3.32. Samantala, ang mga estratehiya sa pagtuturo ay "Naisasagawa," partikular ang brainstorming (3.53), na siyang pinakamadalas gamitin. Lumabas din na ang mga pangunahing suliraning nararanasan ay ang kolonyal na mentalidad (2.89), kakulangan sa bokabularyo (2.79), at kakulangan sa oras (2.74), na naglalagay ng hamon sa mas malalim na pag-unawa ng mag-aaral. Batay dito, binuo ang kagamitang pang-interbensiyon na kinakailangang isailalim sa pormal na balidasyon upang matiyak ang bisa at kaangkupan nito. Iminumungkahi ring gamitin ito ng mas malawak na bilang ng mag-aaral upang higit na mapaunlad ang kanilang kasanayan sa Filipino 7.

Kzywords: kagamitang pang-interbensiyon, kasanayang pampagkatuto

PANIMULA

Ang pagtuturo ng Filipino sa sekundarya ay may mahalagang papel sa paghubog ng kakayahang komunikatibo, pag-unawa sa panitikan, at pagpapahalaga sa kulturang Pilipino. Sa Filipino 7, itinatakda ang pundasyon

para sa paglinang ng kritikal na pag-iisip at mas malalim na pag-unawa sa mga tekstong pampanitikan at di-pampanitikan, na nagiging daan upang maunawaan ng kabataan ang kanilang identidad bilang Pilipino.

Tinukoy ni Nixon (2014) ang pagbabasa bilang isang pangunahing kasanayan na nagbibigay-daan sa patuloy na pagkatuto. Gayunpaman, sa panahon ng digitalisasyon, maraming mag-aaral ang mas naaakit sa mabilis ngunit mababaw na impormasyon mula sa internet kaysa sa masusing pagbabasa ng mga tekstong pampanitikan. Ipinaliwanag nina DeValle et al. (n.d.) na ang labis na pag-asa sa internet ay maaaring makaapekto sa tradisyonal na pag-aaral kung hindi ito maitatawid tungo sa balanseng integrasyon sa silid-aralan. Kaugnay nito, pinatutunayan nina Cabigao (2021) at Lazaro-Zamora (2016) na ang wastong paggabay ng guro, suporta ng mga magulang, at angkop na kagamitang panturo ay mahalagang salik upang mapataas ang antas ng pagkatuto.

Batay sa teorya nina Piaget at Vygotsky, ang pagkatuto ay higit na napauunlad sa pamamagitan ng interaksyon, kolaborasyon, at aktibong pagbuo ng kahulugan. Ito ay nagpapahiwatig na ang tradisyunal na pagtuturo ay kinakailangang sabayan ng makabagong estratehiya upang maitugma sa pangangailangan ng mga mag-aaral sa kasalukuyang panahon—mga estratehiyang nagbibigay-daan sa mas mataas na antas ng pag-iisip at paglikha.

Gayunpaman, kinakaharap ng mga guro at mag-aaral sa Filipino 7 ang iba't ibang hamon gaya ng kakulangan sa interes, limitadong oras, kolonyal na mentalidad, at kahinaan sa bokabularyo. Dahil dito, mahalaga ang pagbuo ng kagamitang pang-interbensiyon na nakabatay sa aktwal na pangangailangan ng mag-aaral. Ang pag-aaral na ito ay tumutugon sa pangangailangang iyon sa pamamagitan ng pagsusuri sa kasalukuyang antas ng kasanayan, mga estratehiya ng guro, at mga suliranin sa pagtuturo upang makabuo ng angkop at epektibong materyales para sa Filipino 7.

MGA KAUGNAY NA LITERATURA

Inilalahad sa kabanatang ito ang mga kaugnay na literaturang konseptwal at literaturang pananaliksik na may kaugnayan sa kasalukuyang pag-aaral na makapagpapaunlad ng balangkas sa nasabing pag-aaral.

Kasanayang Pampagkatuto sa Wika at Panitikan

Ayon kay Aclinen at Olesio (2023), mataas ang antas ng pag-unawa ng mga mag-aaral sa mga tekstong pampanitikan dahil madalas itong naipapakilala sa klase, subalit nananatiling hamon ang pagsusuri ng tekstong di-pampanitikan at pagbuo ng mas komplikadong output. Sumusuporta ito sa napag-alaman ng pag-aaral na ang mga kasanayang nangangailangan ng kritikal na pagsusuri at malikhaing pagbuo ay may mas mababang mean.

Estratehiya Sa Pagtuturo

Ayon kay Acuña et al. (2015), ang masusing paghahanda ng guro ay isang mahalagang katangian ng mabisang estratehiya sa pagtuturo ng Filipino. Samantala, natukoy ni De Guzman (2023) na ang pinakaginagamit na estratehiya ng mga guro ay pagsusulat ng sanaysay tungkol sa mga napapanahong isyu, habang ang "charades" ang hindi gaanong ginagamit. Sa isang pag-aaral ni Roces (2024), sinuri ang mga estratehiya sa pagtuturo ng mga guro sa asignaturang Filipino at natuklasan na madalas nilang gamitin ang aktibong pamamaraan tulad ng brainstorming, role playing, at collaboration sa pamamagitan ng graphic organizers.

Kagamitang Panturo

Tinalakay nina Acuña et al. (2015) ang kahalagahan ng paggamit ng manwal, biswal na materyales, at iba pang kagamitang panturo. Ayon kina Falsado et al. (2004), kabilang sa madalas gamitin ay aklat, plaskard, tsart, at pisara. Samantala, binuo ni Alday (2024) ang pantulong na kagamitan para sa Baitang 9 na naglalaman ng mga pagsasanay na may pang-unawa sa teksto. Kaugnay nito, nagpanukala si Castro (2024) ng supplemental na kagamitang nakabatay sa kasanayan ng guro sa pagtatasa.

Kasanayang Pampagkatuto

Sa pagsusuri ni Nacor (2024), pitong kasanayang pampagkatuto ang nasa antas na bihasa, habang tatlo ang kulang sa kasanayan. Sinuri naman nina Aclinen at Olesio (2023) ang antas ng kasanayan sa pag-unawa sa pagbasa ng mga mag-aaral sa Grade 8 kung saan pinakamataas ang kanilang pagganap sa mga kasanayang sa pag-unawa ng tekstong pampanitikan at katamtamang antas sa mga kasanayang nangangailangan ng analitikal na pagproseso at malikhaing pagbuo ng output. Ayon kina Abaigar, Galit, at Balderian (2024), karamihan sa

Grade 6 na mag-aaral ay nasa antas ng frustration sa comprehension, na nagpapakita ng kahinaan sa pag-unawa ng tekstong pampanitikan at di-pampanitikan. Tinukoy din nila ang mga salik na nakakaapekto sa pagkatuto, tulad ng kakulangan sa materyales, mababang reading habit, at limitadong exposure sa wika. Ayon naman sa pag-aaral nina Ismun, Tulawie, at Asiri (2024), may direktang koneksyon sa pagitan ng paggamit ng materyales at ang solusyon sa kakulangan ng kagamitan, na nagpapakita ng kahalagahan ng maayos na distribusyon at kalidad ng learning materials sa epektibong pagkatuto.

Suliranin Sa Pagtuturo

Ayon kay Acuña et al. (2015), pangunahing suliranin ng mga guro ang kakulangan sa badyet at oras sa pagtuturo. Nabanggit naman nina Contreras et al. (2007) na ang maingay na klase at maraming preparasyon ay karaniwang hamon na nakaaapekto sa epektibong pamamahala ng aralin. Samantala, tinukoy nina De Leon et al. (2004) at Fasado et al. (2004) na ang kakulangan sa karanasan at impormasyon ay nagiging hadlang sa mabisang pagtuturo. Dagdag pa ni Castro (2024), mayroon pang walong suliraning karaniwang nararanasan ng mga guro. Sa pag-aaral naman ni Bautista (2004), lumitaw na kabilang sa mga pangunahing suliranin ang kakulangan sa kagamitang panturo, kasanayan ng mga guro, suliranin sa mga mag-aaral, suliranin sa paaralan, at mga isyu sa loob ng silid-aralan. Natukoy naman ni Peñeda (2021) ang iba't ibang hamon sa pagtuturo ng asignaturang Filipino gaya ng limitadong oras para sa pagtalakay, kakulangan sa materyales, at pagiging mahirap ng ilang bahagi ng panitikan para sa mga guro at mag-aaral.

PAGLALAHAD NG SULIRANIN

Upang matamo ang layunin ng pag-aaral na ito na suriin ang kalagayan ng pagtuturo ng Filipino 7 sa Sangay ng Lunsod Batangas bilang batayan sa pagbuo ng kagamitang pang-interbensiyon, itinakda ang mga sumusunod na katanungan na siyang magiging gabay sa pangangalap at pagsusuri ng mga datos:

1. Ano-ano ang mga kasanayang pampagkatuto na itinuturo sa asignaturang Filipino 7 sa Sangay ng Lunsod Batangas?
2. Ano-anong estratehiya sa pagtuturo ang ginagamit ng mga guro sa pagtuturo ng Filipino 7?

3. Ano ang mga suliraning kinakaharap ng mga guro sa pagtuturo ng Filipino 7?
4. Anong gawaing pang-interbensiyon ang maaaring mabuo batay sa mga natuklasan upang higit na mapahusay ang pagtuturo at pagkatuto sa Filipino 7?

METODOLOHIYA

Sa kabanatang ito, tatalakayin ang mga pamamaraan at proseso na ginamit sa pagsasagawa ng pananaliksik. Ilalarawan dito ang disenyo ng pananaliksik, mga kalahok o respondente, at ang mga instrumentong ginamit sa pangangalap ng datos. Ipapaliwanag din ang mga hakbang sa pagkuha ng mga impormasyon, gayundin ang mga paraan ng pagsusuri at interpretasyon ng mga nakalap na datos, kabilang ang mga ginamit na estadistikal na pamamaraan. Bukod dito, isasaad din sa kabanatang ito ang mga etikal na konsiderasyong sinunod upang matiyak ang pagiging makatao, makatarungan, at mapagkakatiwalaan ng buong proseso ng pag-aaral.

Disenyo ng Pananaliksik

Gumamit ang pag-aaral ng deskriptibong disenyo upang matukoy ang antas ng kasanayang pampagkatuto, mga estratehiya ng guro, at mga suliraning nararanasan sa pagtuturo ng Filipino 7.

Kalahok sa Pag-aaral

Limampung guro mula sa dalawampung paaralan sa Sangay ng Lunsod Batangas ang lumahok sa pag-aaral. Ipinapakita sa talahanayan sa ibaba ang distribusyon ng mga kalahok.

Purok / Distrito	Bilang ng mga Paaralan (Filipino 7)	Bilang ng mga Guro
1	2	5
2	2	4
3	2	5
4	3	18
5	1	3
6	1	2
7	2	3
8	2	3
9	2	3
10	3	4
Kabuoan	**20**	**50**

Instrumentong Ginamit sa Pag-aaral

Gumamit ng talatanungan ang mga mananaliksik sa pangangalap ng datos at pakikipanayam sa pangangalap ng datos na may kinalaman sa pagbuo ng gawaing pang-interbensiyon sa Filipino 7.

Paraan ng Pagkuha ng mga Datos

Sinimulan ang pangangalap ng datos sa pamamagitan ng pagsusuri sa mga elektronikong sanggunian mula sa internet, kabilang ang mga artikulo, dyornal, aklat, at iba pang kaugnay na babasahin. Gumamit din ng mga nakalimbag na tesis at disertasyon mula sa iba't ibang silid-aklatan upang makakuha ng dagdag na impormasyon para sa pag-aaral.

Matapos tipunin ang mga sanggunian, binuo ang gabay na tanong para sa pakikipanayam. Ang mga ito ay sumailalim sa proseso ng balidasyon upang matiyak ang kawastuan, kaugnayan, at pagiging angkop sa layunin ng pananaliksik. Pagkatapos ng balidasyon, isinagawa ang pakikipanayam at pagpapasagot ng talatanungan sa mga kalahok upang makalap ang kinakailangang datos.

Ang lahat ng impormasyong nakalap ay maingat na itinala, inayos, at inihanda para sa sistematikong paglalahad, pagsusuri, at pagbibigay-kahulugan. Ang mga kinalabasan ng pag-aaral ay maaaring magsilbing batayan sa pagbuo o pagpapaunlad ng mga susunod na interbensiyon sa pagtuturo ng Filipino.

RESULTA AT KINALABASAN

Batay sa ipinakitang datos, makikitang lahat ng kasanayang pampagkatuto sa Filipino 7 ay may verbal na interpretasyong "Natatalakay," na nagpapahiwatig na naaabot ng mga mag-aaral ang inaasahang pamantayan sa kurikulum. Ang pinakamataas na marka ay nasa kasanayang nauukol sa pagbanggit at pag-uugnay ng mahahalagang pangyayari kaugnay ng mga tekstong pampanitikan (WM = 3.47), na nagpapakitang ito ang pinakamalinaw na naipapaliwanag at natututuhan. Sinusundan ito ng kasanayang nakatuon sa kritikal na pag-unawa (WM = 3.37), samantalang ang iba pang kasanayan, kabilang ang pagsusuri ng tekstong ekspositori, pag-unawa sa tekstong biswal, at pagbuo ng multimodal na sanaysay ay nagtatamo rin ng katanggap-tanggap na antas (WM = 3.21–3.32).

I. Kasanayang Pampagkatuto Ng Mga Mag-Aaral Sa Filipino 7

Mga Kasanayang Pampagkatuto	Weighted Mean	Interpretasyong Berbal
1. Naiisa-isa ang mahahalagang pangyayari sa panahon ng katutubo kaugnay ng mga tekstong pampanitikan.	3.47	Natatalakay
2. Nasusuri ang mga detalye ng teksto para sa kritikal na pag-unawa.	3.37	Natatalakay
3. Nauunawaan ang tekstong ekspositori gamit ang mga kasanayang pang-akademik.	3.26	Natatalakay
4. Nasusuri ang tekstong ekspositori batay sa estruktura nito.	3.32	Natatalakay
5. Nasusuri ang mga tekstong biswal batay sa mga elemento.	3.32	Natatalakay
6. Nakabubuo ng sanaysay tungkol sa pinakatampok na mga pangyayari sa buhay ng isang tauhan sa binasang akda sa pamamagitan ng tekstong multimodal.	3.32	Natatalakay
7. Naibabahagi ang nabuong proseso sa paglikha ng sanaysay tungkol sa pinakatampok na mga pangyayari na buhay ng isang tauhan sa binasang akda at burador ng comic book brochure sa napiling platform na isinasaalang-alang ang kasanayang komunikatibo, etikal na kasanayan at pananagutan.	3.21	Natatalakay
Composite Mean	**3.32**	**Natatalakay**

Sa kabuuan, ang composite mean na 3.32 ay nagpapakitang epektibong naipatutupad ng mga guro ang mga estratehiya sa pagtuturo ng Filipino 7. Ipinahihiwatig nito na nagiging matagumpay ang pagtalakay sa mga pangunahing kasanayan, bagaman may ilang bahaging maaaring higit pang pagtibayin upang mapataas ang pagganap ng mag-aaral. Mahalaga ang resultang ito sapagkat direkta nitong sinasagot ang unang katanungan ng pag-aaral hinggil sa antas ng kasanayang pampagkatuto. Nagsisilbi rin itong batayan sa pagdidisenyo ng mga interbensiyong maaaring makatulong sa pagpapalakas ng mga kasanayang may mas mababang marka.

Ang mga natuklasang ito ay kaayon ng pag-aaral nina Aclinen at Olesio (2023), na sinuri ang antas ng kasanayan sa pag-unawa sa pagbasa ng mga mag-aaral sa Grade 8. Lumabas sa kanilang pag-aaral na ang mga mag-aaral ay

nagtatamo ng mataas na antas ng pagkatuto sa mga kasanayang may kinalaman sa pagkilala at pag-unawa ng mahahalagang impormasyon sa tekstong pampanitikan, samantalang ang mga kasanayang nangangailangan ng mas malalim na pagsusuri at pagbuo—tulad ng pagsusuri ng tekstong di-pampanitikan at pagbuo ng mas kompleks na output—ay nasa katamtamang antas lamang. Iniuugnay nila ang pagkakaibang ito sa dalas ng exposure ng mga mag-aaral sa literary texts at sa sistematikong pagtuturo ng mga guro, isang sitwasyong kahawig ng nakitang padron sa Filipino 7.

II. *Mga Estratehiya Ng Guro Sa Pagtuturo*

Lumabas sa resulta na pangkalahatang naisasagawa ng mga guro ang iba't ibang estratehiya sa pagtuturo, na may composite mean na 3.28. Pinakamataas ang brainstorming (3.53), na nagpapakita na ito ang pinakapamilyar at pinakamadalas gamitin upang pasiglahin ang aktibong pagbuo ng ideya ng mga mag-aaral. Sinundan ito ng role playing, think-pair-share, concept mapping, at pagbabalitaan, na pawang nakakuha ng mataas na marka (3.42–3.47), na nagpapahiwatig na mas ginagamit ng mga guro ang mga kolaboratibo at interaktibong pamamaraan sa klase.

Samantala, ang sociodrama (2.89), panel discussion (3.00), at paggamit ng TV commercial (3.11) ay may mas mababang mean, bagama't nananatiling "naisasagawa." Ipinahihiwatig nito na bagama't nagagamit ang mga estratehiyang ito, maaaring hindi pa ito lubos na naipalalawak dahil sa limitasyon sa oras, paghahanda, o angkop na pagkakataon sa aralin. Sa kabuuan, makikitang may sapat na pag-iba sa estratehiyang ginagamit ng mga guro, subalit mas namamayani ang mga teknik na mas madaling maipatupad at mas nakapagpapalawak ng partisipasyon ng mag-aaral.

Mga Estratehiya sa Pagtuturo	Weighted Mean	Interpretasyong Berbal
1. Nakapagsasagawa ng *roundtable discussion*.	3.11	Naisasagawa
2. Nagagamit ang *panel discussion* sa pagtuturo.	3.00	Naisasagawa
3. Nailalapat ang paggamit ng *brainstorming* sa klase.	3.53	Lubos na naisasagawa
4. Naisasakatuparan ang *role playing* sa klaseng pangklasrum.	3.47	Naisasagawa

5. Naisasabuhay sa klase ang paggamit ng *sociodrama.*	2.89	Naisasagawa
6. Nabibigyang-pansin ang pagsasagawa ng *picture power.*	3.32	Naisasagawa
7. Napag-uukulan ng panahon ang pagsasakatuparan ng *think -pair and share.*	3.47	Naisasagawa
8. Nakabubuo ng *concept mapping* bilang bahagi ng pagkatuto.	3.47	Naisasagawa
9. Naipamamalas ang makabuluhang paggamit *TV commercial.*	3.11	Naisasagawa
10. Nagiging daan sa pagkatuto ang konsepto ng pagbabalitaan sa pag-alam at pagbuo ng mga ideya.	3.42	Naisasagawa
Composite Mean	**3.28**	**Naisasagawa**

Sa isang pag-aaral ni Roces (2024), sinuri ang mga estratehiya sa pagtuturo ng mga guro sa asignaturang Filipino at natuklasan na madalas nilang gamitin ang aktibong pamamaraan tulad ng brainstorming, role playing, at collaboration sa pamamagitan ng graphic organizers. Ang paggamit ng mga ganitong stratehiya ay sumusuporta sa kasalukuyang resulta ng pag-aaral, na nagpapakita ng mataas na mean para sa brainstorming at iba pang interaktibong teknik.

III. *Mga Suliraning Nararanasan Sa Pagtuturo*

Ipinakita ng datos na ilang pangunahing suliranin sa pagtuturo ng Filipino 7 ang malinaw na nararanasan ng mga guro, partikular ang kolonyal na mentalidad ng mga mag-aaral (WM = 2.89), kahinaan sa bokabularyo (2.79), kakulangan sa oras (2.74), at mga isyung kaugnay ng wika at pag-unawa (2.68). Ipinahihiwatig nito na ang mga hamong nakaugat sa kakayahan at pananaw ng mag-aaral ang higit na nakaaapekto sa pagtuturo.

Samantala, ang iba pang suliranin, gaya ng kakulangan sa kaalaman sa makabagong pamamaraan, kakulangan sa kagamitan, at kapaligiran sa paaralan, ay bahagyang nararanasan, na nagpapakitang hindi ito kasing bigat ng mga suliraning may kaugnayan sa pagkatuto ng mag-aaral. Sa kabuuan, ang composite mean na 2.40 ay nagpapakita ng katamtamang antas ng suliranin, na

nangangahulugang umiiral ang mga hamon ngunit hindi lubos na humahadlang sa implementasyon ng pagtuturo.

Mga Suliraning Nararanasan	Weighted Mean	Interpretasyong Berbal
1. Kakulangan sa oras o panahong itinakda para sa klase.	2.74	Nararanasan
2. Kapaligiran ng paaralan ay suliranin sa pagtuturo.	2.16	Bahagyang Nararanasan
3. Kakulangan ng kaalaman sa makabagong paraan ng guro.	1.95	Bahagyang Nararanasan
4. Kakulangan sa mga kagamitang panturo.	2.05	Bahagyang Nararanasan
5. Kawalan ng interes ng mga mag-aaral.	2.42	Bahagyang Nararanasan
6. Kahinaan sa bokabularyo ng mga mag-aaral.	2.79	Nararanasan
7. Pag-iral ng mga salitang impormal na antas ng wika.	2.68	Nararanasan
8. Mahinang kakayahan ng mga mag-aaral sa paglinang ng mga kaalaman.	2.68	Nararanasan
9. Kolonyal na mentalidad ng mga mag-aaral.	2.89	Nararanasan
10. Kakulangan sa paggamit ng guro sa teknik / estratehiya sa pagtuturo.	1.63	Bahagyang Nararanasan
Composite Mean	**2.40**	**Nararanasan**

Sa isang pag-aaral na isinagawa sa mga piling tersaryong paaralan sa Leyte at Samar, natukoy ni Peñeda (2021) ang iba't ibang hamon sa pagtuturo ng asignaturang Filipino. Kabilang dito ang limitadong oras para sa pagtalakay, kakulangan sa materyales, at pagiging mahirap ng ilang bahagi ng panitikan para sa mga guro at mag-aaral.

KONGKLUSYON AT REKOMENDASYON

Batay sa mga natuklasan ng pag-aaral, napatunayang naitatalakay ng mga guro ang lahat ng kasanayang pampagkatuto sa Filipino 7, at ang brainstorming ang pinakamadalas gamitin bilang estratehiya sa pagtuturo. Gayunpaman, lumitaw na malaking hamon ang kolonyal na mentalidad ng mga mag-aaral at ang kakulangan sa oras sa loob ng klase, na nagiging hadlang sa

mas malalim na pag-unawa sa aralin. Mula rin sa mga datos, natukoy na ang nabuong kagamitang pang-interbensiyon ay may potensiyal na makatulong sa pagpapaunlad ng pagkatuto at pagtuturo sa asignatura.

Bilang tugon sa mga natukoy na pangangailangan, inirerekomenda na ipasailalim sa pormal na balidasyon ang nabuong gawaing pang-interbensiyon upang matiyak ang kaangkupan at bisa nito. Iminumungkahi ring ipagamit ito sa mga mag-aaral bilang bahagi ng pagpapalakas sa kasanayang pampagkatuto sa Filipino 7. Hinihikayat din ang pagsasagawa ng kahalintulad na pag-aaral sa mas malawak na bilang ng mga paaralan upang higit na mapagtibay ang mga natuklasan at makabuo ng iba pang mabisang interbensiyon na maaaring makatulong sa pag-unlad ng pagtuturo ng Filipino.

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PROFESSIONAL LEARNING COMMUNITIES: BATANGAS CITY DISTRICT IV ELEMENTARY TEACHERS TOWARD IMPROVED PRACTICES

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Abstract: The primary purpose of this research is to assess the collaborative learning activities being engaged in by the elementary teachers in District IV, Division of Batangas City and determine their effectiveness in establishing professional learning communities. Descriptive method of research was used using frequency, percentage and weighted mean for the analysis of data. The respondents were 50 elementary school teachers from the four elementary schools in District IV namely, Malitam, Sta Clara, Wawa and Ambulong. Researcher-made questionnaire was utilized for this study. The collaborative learning activities being engaged in by the teachers include face to face and virtual professional collaborations. Professional learning engagements help improve teaching competencies. The PLC activities are being performed by the teachers to a very great extent. Common issues include excessive workload, passive attitude of teachers, poor internet connections, limited time to collaborate and lack of skill in using different platforms. An action plan was prepared and is recommended for evaluation by concerned District personnel in coordination with the DepEd thrust of improving the professional learning engagements among teachers. Researchers may explore other professional learning community activities not included in this research in their future studies.

Keywords: collaborative learning activities, professional learning communities, reflective dialogue, shared values and norms, teachers' practices

INTRODUCTION

Education system in most countries is increasingly concerned in improving student outcome. Legislation that identifies equal access to education compels educators to meet diverse educational needs under high accountability contexts. Consequently, classroom teachers are in conflict between policy handed down and the complexity of context brought about by individual differences and other

school factors. The role of the school head in providing technical assistance to these teachers is really very significant.

In recent years, schools typically do not encourage shared thinking; rather, teachers are generally free to make their own instructional decisions. These days, it is reflected in school set up that there are lots of professional learning activities being engaged in by teachers. A professional learning community (PLC) is a team of educators who share ideas to enhance their teaching practice and create a learning environment where all students can reach their fullest potential.

Transforming a school into a learning community, however, can pose some significant challenges for educators. Building a learning organization requires organizational members to have access to such resources as time to collaborate, ongoing leadership support, information, and ready access to colleagues. A lack of meaningful opportunities to engage in learning activities can limit the capacity of schools to become learning organizations. Apparently, improvement of practices can be achieved through establishment of effective professional learning communities.

According to Antinluoma, Ilomäki & Toom (2021), as referenced in many recent studies) describe a PLC as: "a group of people sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented and growth-promoting way … operating as a collective enterprise."

As professional learning communities, the collective improvement is marked by being evidence-informed, guided by collective judgment, and being motivated by experts while engaged in high-quality conversations about effective and ineffective classroom practices. It is believed that the use of PLCs even among teachers and school heads in schools offers a powerful infrastructure where teachers can engage in constructive dialogue, reflect on and improve instruction, and learn how to become more effective in the classroom to improve student learning.

The researcher, who is an instructional leader, observes that most of the teachers in Malitam Elementary School often employ collaborative learning activities and share best practices. She decided to conduct action research to assess the existing mechanism on how these teachers relate with each other and how such professional learning engagements help improve their teaching competencies and practices.

The primary purpose of this research is to assess the collaborative learning activities being engaged in by the teachers of District IV in the Division of Batangas City and determine their effectiveness in establishing professional learning communities. The researcher believes that when these practices are analyzed, and when issues and concerns are identified, a new mechanism for PLC may be established to improve teachers' practices.

Literature Review

Teacher collaboration has long been regarded as a cornerstone of educational improvement and professional growth. Vangrieken, Dochy, Raes, and Kyndt (2015) conducted a systematic review that highlighted the various forms of teacher collaboration such as team teaching, lesson planning, peer coaching, and reflective dialogue. Their study emphasized that collaboration strengthens collegial relationships and promotes continuous professional learning. However, they also noted that time constraints, lack of administrative support, and differences in teaching philosophies can hinder collaborative success. Complementing this, Darling-Hammond, Hyler, and Gardner (2017) identified collaboration as one of the key components of effective professional development. They stressed that when teachers engage in sustained, active, and collaborative learning experiences aligned with curriculum goals, their instructional practices and student outcomes significantly improve.

In recent years, researchers have further examined the role of Professional Learning Communities (PLCs) in promoting collaboration. O'Connor and Park (2023) explored how collaborative, data-based decision-making within PLCs influences teaching practice and revealed that teachers who regularly analyze student data together demonstrate more effective classroom strategies. Similarly, Mariani-Petroze (2023) investigated the positive impacts of PLCs on student performance, concluding that shared norms, reflective dialogue, and collective inquiry within PLCs contribute to measurable gains in student achievement. In a related study, Khasawneh (2023) found that teachers engaged in PLCs exhibit stronger professional engagement, shared leadership, and accountability, which together foster a culture of continuous learning.

The Philippine educational setting has also shown promising evidence of teacher collaboration. Bautista (2021) explored Filipino teachers' experiences with lesson study and collaborative learning activities, finding that structured collaboration enhances reflective teaching and classroom innovation. Likewise,

Gamboa (2022) conducted a descriptive-correlational study among state university faculty members and found a significant positive relationship between teacher collaboration and instructional effectiveness. These findings mirror the current study's approach, which employs a quantitative design to describe and measure the effectiveness of collaborative learning activities among elementary teachers.

Expanding on this, Tuli and Bekele (2020) presented an international review of literature that underscored the critical role of institutional culture, shared vision, and leadership in sustaining effective PLCs. They concluded that collaboration among teachers leads to improved pedagogical practices and collective responsibility for student success. Nguyen, Nga, and Thao (2024) conducted a Scopus-based analysis of PLC studies from 2019 to 2024, identifying emerging themes such as digital collaboration, leadership influence, and teacher agency. Their review shows that PLCs remain relevant and evolving frameworks for promoting professional development in both traditional and technology-enhanced learning environments.

Several recent studies have also explored the contextual factors that influence teacher participation in PLCs. An open-access study published in 2022 identified trust, administrative support, and structured meeting schedules as facilitators of collaboration, while lack of time and resources served as barriers. Similarly, Yunus (2024) examined English language teachers' preferences in utilizing PLC tools and discovered that collaborative activities such as peer observation, mentoring, and learning walks were among the most effective, though often limited by workload pressures. These findings underscore the importance of supportive school structures in sustaining collaborative initiatives.

In addition, Vichaidit, Khumraksa, and Nakwijit (2025) investigated a PLC-based teacher development program designed to enhance science teachers' competencies. Their research revealed that collaboration through group reflection and knowledge sharing significantly improved teachers' professional skills. In the same vein, Cheng and Zhao (2023) found that participation in PLCs positively affects pre-service teachers' professional commitment, suggesting that collaborative learning communities not only benefit in-service teachers but also shape the professional identities of future educators. Furthermore, Lira (2023) emphasized that PLCs serve as catalysts for transformational learning, fostering deeper pedagogical understanding and sustained instructional improvement.

Moreover, the integration of technology in collaborative learning has been increasingly studied. A 2024 investigation involving over 16,000 STEM teachers revealed that PLC engagement mediates the relationship between digital professional development and the integration of technology into classroom instruction. This indicates that PLCs remain effective even in virtual or hybrid learning environments, expanding their relevance beyond face-to-face collaboration. Another 2024 study on teachers' collaborative knowledge building revealed that reflective dialogues and joint inquiry are key predictors of learning gains within PLCs, suggesting that the quality of interaction within these communities is as important as their structure.

Taken collectively, these studies affirm that teacher collaboration and participation in professional learning communities lead to enhanced instructional effectiveness, professional growth, and improved student learning outcomes. The reviewed literature establishes a strong theoretical and empirical foundation for the present study, which aims to describe the collaborative learning activities of elementary teachers in Batangas City District IV and determine their effectiveness in establishing professional learning communities using a quantitative research approach.

Research Questions

1. What are the collaborative learning activities being engaged by the elementary teachers in District IV, Division of Batangas City?
2. How do teachers benefit from these professional learning engagements?
3. To what extent of implementation are the Professional Learning Communities in terms of:
   3.1 Reflective Dialogue
   3.2 Focus on Student Learning
   3.3 Interaction among co-teachers and colleagues
   3.4 Collaboration
   3.5 Shared Values and Norms)
4. What common difficulties, issues and concerns do they encounter in engaging in professional learning communities?
5. What plan of action may be proposed to enhance the Professional Learning Community in Batangas City District IV?

METHODOLOGY

The subjects of this study were 50 elementary teachers from four public schools in Batangas City District IV, specifically Malitam Elementary School, Sta. Clara Elementary School, Wawa Elementary School, and Ambulong Elementary School. These participants were selected to provide a representative sample of teachers actively engaged in collaborative learning practices within the district.

Since this study employed a quantitative research method, the focus was on gathering measurable data regarding the teachers' participation in collaborative learning activities and their perceptions of its effectiveness in establishing professional learning communities. The selected teachers served as respondents to the structured questionnaire, which allowed the researcher to collect numerical data that could be statistically analyzed. By involving teachers from multiple schools, the study aimed to capture diverse perspectives while ensuring the reliability and generalizability of the findings across the district.

Research design

The study employed the descriptive type of research, which primarily aims to describe the collaborative learning activities being engaged in by teachers and determine their effectiveness in establishing professional learning communities. This design is appropriate because it focuses on providing an accurate portrayal of existing conditions, practices, or phenomena without manipulating variables. Through this approach, the researcher was able to gather factual data that reflect the current status of teachers' collaborative learning practices and how these contribute to the formation and sustainability of professional learning communities.

Research Instruments

The main instrument used for data collection was a researcher-made questionnaire. This tool was carefully crafted to obtain relevant information about teachers' participation in collaborative learning and their perceptions of its effectiveness. The questionnaire was administered to teacher-respondents through Google Forms for accessibility and ease of response. The collected data were then tallied, tabulated, and subjected to appropriate statistical treatment to ensure accurate interpretation of results. The use of a structured questionnaire allowed the researcher to gather quantifiable data systematically and efficiently from a larger group of participants.

Data Analysis

The data gathered through the researcher-made questionnaire were carefully organized, tallied, and tabulated using statistical tools appropriate for descriptive research. Frequency counts and percentage distributions were utilized to present the demographic profile of the respondents and their responses to each questionnaire item. Weighted mean was computed to determine the overall assessment of teachers regarding the collaborative learning activities and their effectiveness in establishing professional learning communities.

The analysis focused on describing patterns and trends that emerged from the data, allowing the researcher to draw insights on how collaborative learning contributes to professional growth and collegial engagement among teachers. The use of descriptive statistics ensured that the results were presented in a clear and systematic manner, reflecting the actual perceptions and experiences of the respondents. Accuracy and consistency were maintained throughout the process to uphold the reliability and validity of the study's findings.

RESULTS AND DISCUSSION

Teacher collaboration is increasingly recognized as an important element in improving instructional practices, promoting reflective dialogue, and enhancing learner educational outcomes. In District IV, collaborative learning activities occur across both traditional and digital platforms—providing a hybrid model of engagement that responds to the evolving demands of the education sector. This section presents survey results of collaborative activities engaged in by teachers and contextualizes them with supporting recent studies.

Table I reveals that face-to-face meetings with the School Head (98%) remain the most popular form of collaboration. This high response from the participants points out the great value of in-person communication, which offers relational depth and clarity in instructional leadership. *Khasawneh et al. (2023)* affirm this, stating that supportive school leadership and structured collaboration significantly enhance professional growth within Professional Learning Communities (PLCs).

Following closely are Focus Group Discussions (88%), demonstrating a strong preference among teachers for reflective conversations among peers. These sessions foster mutual support and idea exchange, a concept emphasized by *Fullan (2020)*, who argues that creating "collaborative cultures" among educators cultivates innovation and shared ownership of learning.

Table 1

Collaborative Learning Activities Being Engaged by Teachers

Collaborative Activities	Frequency	Percentage	Rank
Faculty meeting with the school head via Google Meet platform	24	48%	7
Face to face teachers' meeting with the School Head	49	98%	1
Group Chatting through Facebook messenger	38	76%	3.5
Submission of reports and sharing in Google Drives	38	76%	3.5
Collaboration in accomplishing reports through Google docs	35	70%	6
Answering and sharing links of Google sheets and forms	37	74%	5
Group collaborative learning activities like Focus Group Discussion	44	88%	2
Video and audio calls	15	30%	8
Professional collaboration through streaming and accomplishing class works in Google Classrooms	9	18%	9
Buzz sessions	7	14%	10

Group chats via Facebook Messenger (76%) and Google Drive sharing (76%) illustrate teachers' adoption of technological advancement through informal platforms for real-time communication and exchange. According to *Sarmiento & Oracion (2021)*, Filipino educators increasingly use such digital tools to collaborate in order to create ease on their teaching tasks like lesson planning, test construction and others. Additionally, Google 38Docs, Sheets, and Forms (70–74%) show strong engagement, suggesting familiarity and comfort with synchronous and asynchronous collaboration.

However, Google Meet meetings (48%), video/audio calls (30%), and Google Classroom collaboration (18%) show lower levels of usage. This may reflect limitations in internet access. Moreover, since the pandemic is over and school personnel can freely engage now in a face-to-face manner, online activities are not so popular now.

Lastly, buzz sessions (14%), though ranked lowest, may simply be because teachers are not familiar with this kind of activity.

The collaborative practices of teachers in District IV shows a combination of traditional interactions and digital innovations. As educators dwell in this hybrid landscape, fostering digital fluency while preserving strong interpersonal connections will be critical to sustaining impactful collaboration.

Table 2

Benefits of the Professional Learning Communities

Benefits of PLCs	Frequency	Percentage	Rank
Allow teachers opportunities to directly improve teaching and learning	50	100	1
Build stronger relationships between team members	44	88	2.5
Help teachers share common experiences promote collaboration that increases chances to constantly learn together and work to discover what is best for teachers, students and school heads themselves	41	82	5
Help teachers reflect on ideas	44	88	2.5
Help teachers innovate in the classroom and improve student outcomes	43	86	4
Ensure that teams work cooperatively to establish common standards	35	70	6
Make space for innovations by engaging in conversations that promote learning, risk taking, and innovation	32	64	7.5
Help teachers stay on top of new research and emerging technology tools for the classroom	32	64	7.5
Cause teachers to constantly engage a cycle of learning by analyzing data, setting goals,	28	56	10

and learning individually and collaboratively, as well as implementing and adjusting practices to meet the needs of all learners			
Harness ongoing process in which school heads and teachers work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve	29	58	9

Professional Learning Communities (PLCs) play a significant role in shaping effective teaching practices and fostering a culture of collaboration in schools. When teachers and school leaders engage in collaborative discussion and sharing of practices, they become agents of change—creating innovation on teaching methods, improving student academic performance, and building stronger professional relationship. Table II presents the benefits of PLCs among teachers in District IV.

Responses in the questionnaire show that all participating teachers (100%) believe that PLCs allow opportunities to directly improve teaching and learning, highlighting the great impact of collaboration. This aligns with *Khasawneh et al. (2023)*, who points out that direct collaboration in PLCs significantly supports instructional improvement and encourages professional growth.

A high percentage of teachers also agreed that PLCs build stronger relationships between team members (88%) and help teachers reflect on ideas (88%). These results reflect the findings of *Fusco et al. (2025)*, who believe that PLCs build trust and mutual support, which are essential for meaningful innovation in the classroom.

Benefits such as classroom innovation (86%) and sharing of common experiences (82%) also ranked high. According to *Li Kong (2023)*, such shared collaborative experiences empower teachers to continually adjust their teaching strategies and better respond to diverse learner needs.

The survey further found that teachers appreciate how PLCs ensure cooperative work on common standards (70%), promote innovation through risk-taking conversations (64%), and help them stay updated with new research and technology tools (64%). This shows how PLCs extend beyond pedagogy—they

foster professional responsiveness in a rapidly evolving educational landscape. *Bhandari (2022)* found similar benefits in language classrooms, where collaborative learning helped teachers adapt new strategies and digital tools.

Although ranked slightly lower, benefits like engaging in cycles of learning (56%) and collaborative action research (58%) are still significant. These results echo *Sarmiento & Oracion (2021)* who noted that action-oriented inquiry in Filipino schools cultivates sustained improvements in teaching practices.

To sum up, the data reveal that educators in District IV recognize PLCs as transformative link for reflection, innovation, and collaborative problem-solving. Supported by recent literature, these findings confirm the critical role PLCs play in empowering teachers to learn continuously, work collectively, and respond firmly to both learners' needs and schools' challenges.

Table 3

Extent of Implementation of PLCs in District IV in Terms of the Five Components

Components	WM	VI
Reflective Dialogue Teachers engage in professional dialogues reflecting on the effectiveness of their practices through LAC Sessions	3.6	VGE
Focus on Student Learning The professional collaborations being done focus on best practices to ensure quality student learning	3.8	VGE
Interaction among co-teachers and colleagues Principal and teachers interact with each other for the improvement of practices, addressing gaps and work on shared goals	3.9	VGE
Collaboration Teachers work together in teams to analyze and improve their classroom practices, engaging in an ongoing cycle of questions that promote deep team learning	3.8	VGE
Shared Values and Norms Professional Learning communities (PLCs) serve as effective vehicles for teacher learning and instructional improvement because they help change professional culture, promote collaboration, reflection and shared values	3.6	VGE
Average	**3.74**	**VGE**

The implementation of Professional Learning Communities (PLCs) provides an organized spectrum for teacher collaboration, instructional improvement, and school empowerment. In District IV, examining how deeply PLC principles are practiced can project their role in shaping a collective culture of growth.

Table III presents the extent of PLC implementation based on five core components. All components fall within the "Very Great Extent" range, revealing a strong and consistent level of PLC practice among educators.

Interaction among co-teachers and leaders with weighted mean of 3.9 ranked highest, signifying that school heads and teachers actively engage in dialogue to bridge instructional gaps and foster shared goals. *Khasawneh et al. (2023)* reinforce that such collaborative leadership significantly enhances school-wide improvement.

Focus on Student Learning and Collaboration both with weighted mean of 3.8 means that deep engagement in teamwork aimed at working on practices for better learners' educational performance. As *Fusco et al. (2025)* highlight, when educators analyze and reflect collaboratively, they build stronger pedagogical strategies and drive continuous classroom innovation.

Reflective Dialogue with its weighted mean of 3.6 also demonstrates meaningful engagement, primarily through Learning Action Cell (LAC) sessions. These monthly conversations enable teachers to reflect and creatively work on changes and innovation on their own practices—an essential feature of sustainable professional growth noted by *Li Kong (2023)*.

Lastly, Shared Values and Norms with a weighted mean of 3.6 shows that teachers view PLCs as a way for cultivating a collaborative culture. The fostering of shared beliefs aligns with *Sarmiento & Oracion (2021)*, who stress that Filipino educators thrive when learning communities are built on trust and joint responsibility.

The findings suggest that PLCs are highly implemented across all five components in District IV, with particularly strong emphasis on collaboration and interaction. These results reflect a healthy and reflective educational practices—one that encourages collective discussion, shared accountability, and a learner-centered mindset.

Table 4

Difficulties, Issues and Concerns Encountered by Teachers

Difficulties, Issues and Concerns	WM	VI
Excessive workload of teachers	2.95	Sometimes
Indifferent/Passive attitude of teachers	2.50	Sometimes
Unsupportive condition in school	1.95	Rarely
Poor execution of PLC by the school community	1.75	Rarely
Vague understanding about PLC	2.40	Rarely
Poor internet connections	3.05	Sometimes
Lack of enough time to collaborate	2.50	Sometimes
Lack of skill in using different platforms	2.55	Sometimes
Lack of teacher ownership of the process	2.50	Sometimes
A building culture in which teachers compete than collaborate	2.10	Rarely
Average	**2.43**	**Rarely**

Table IV contains the issues and concerns being encountered by the teachers in performing professional learning community activities. Excessive workload of teachers, passive attitude of teachers, poor internet connections, lack of enough time to collaborate, lack of skill in using different platforms and lack of teacher ownership of the process are sometimes experienced by the teachers. Unsupportive condition of the school, poor execution and vague understanding of PLC, and a culture of professional competition are considered by teachers as rarely encountered.

ACTION PLAN TO ENHANCE THE PLC ACTIVITIES AT DISTRICT IV, DIVISION OF BATANGAS CITY

Goal:

To enhance the implementation of PLCs across District IV by promoting collaborative culture, manipulating digital tools, addressing problems and gaps, and elevating instructional outcomes.

Objectives	Strategies/ Activities	Persons Involved	Timeline	Expected Outcome
1.Deepen understanding pf PLC Principles	• Conduct workshops on PLC components and benefits • Share success stories from within the District	District Supervisor School Heads Teachers	July-August 2025	Improved understanding about PLC and strong acceptance from teachers
2. Strengthen Collaboration Culture	• Meet school heads and teachers and present the findings of the research conducted and the need to enhance PLC activities to meet desired goals. • Conduct brainstorming session about the existing PLC activities that they are engaged in. • Facilitate monthly LAC sessions focused on peer sharing	District Supervisor School Heads Master Teachers LAC Coordinators Teachers	July-August 2025 July 2025-March 2026	Increased interaction and trust among teachers

3.Enhance Digital Collaboration Capacity	• Provide trainings for Google docs, sheets, classroom ets. • Establish virtual PLC channels (Facebook groups and shared drives)	School Head ICT Coordinator Teachers	August 2025-November 2025	Greater efficiency and flexibility in collaboration
4.Address Time and Workload Constraints	• Schedule dedicated PLC hours within school calendars • Encourage short but focused sessions	School Heads Teachers	September 2025-March 2026	Sustainable PLC practice despite busy schedules
5.Foster Teacher Ownership and Leadership	• Empower teachers to lead PLC groups • Recognize and reward active collaborators through performance-based incentives	School Heads Teachers	September 2025-March 2026	Stronger engagement and accountability from teachers

CONCLUSION

The collaborative learning activities being engaged in by the teachers include face to face and virtual professional collaborations. There are benefits of PLCs among elementary teachers in Batangas City District IV. Those professional learning engagements help improve their teaching competencies. The PLC activities are being performed by the teachers to a very great extent. They are serious in the implementation of professional collaboration. There are common

difficulties, issues and concerns encountered by teachers in engaging in professional learning communities which include poor internet connections, excessive workload, lack of skill in using different platforms and lack enough time to collaborate. An action plan was prepared for the purpose of improving teaching practices and collaboration among elementary teachers in District IV, Division of Batangas City.

RECOMMENDATIONS

From the conclusions drawn, it is recommended that the proposed action plan and mechanism for PLC may be subjected for evaluation by concerned District personnel in coordination with the DepEd thrust of improving the professional learning engagements among teachers. The proposed action plan is recommended for use by school head and teachers in District IV, Division of Batangas City. Future researchers may explore other professional learning community activities not included in this research in their future studies

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READ TO SUCCEED: THE ROLE OF COMMUNITY ENGAGEMENT IN FOSTERING READING COMPETENCE

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Abstract: This study aimed to determine how community collaboration can improve the reading proficiency of Grade 10 learners, assess their current reading levels, and recommend activities to enhance reading skills. Conducted at Natalia V. Ramos Memorial Integrated School, the research utilized a mixed-method approach, combining quantitative analysis of PHIL-IRI results with qualitative data from learner interviews. Findings showed that 45.14% of learners were at the independent level, 51.10% at the instructional level, and 7.52% at the frustration level, indicating the need for targeted interventions. Two key themes emerged: Volunteer and Peer Support, and Encouragement and Motivation, emphasizing the positive impact of community and emotional support on learners' confidence and reading engagement. The study concludes that community involvement plays a crucial role in improving reading proficiency and recommends implementing the *Read to Succeed: A Community Collaboration for Reading Success* program to promote sustained literacy development among learners.

Keywords: community collaboration, literacy development, PHIL-IRI, reading proficiency

INTRODUCTION

Reading is a fundamental skill required for academic achievement and lifelong learning, and its development is a shared duty of schools, families, and the community. Strengthening reading performance among secondary students necessitates a collaborative approach, particularly when students struggle to grasp texts from many areas. This action research examines how community cooperation might increase secondary students' reading performance by including parents, local leaders, and volunteers in reading activities and treatments. This study begins by determining the target learners' current reading

competence level using the Philippine Informal Reading Inventory (Phil-IRI) as a baseline. Understanding these levels can aid in the development of community-based programs under the "READ to SUCCEED" project, which seeks to create communal responsibility in addressing difficulties with reading and boosting learners' comprehension and fluency level.

Reading development is not limited to the classroom; it flourishes in communities where learners are supported holistically. Recent research indicates that community participation is critical for improving reading proficiency, particularly among secondary-level learners. Vygotsky's theory of Sociocultural Cognitive Development emphasizes the importance of social interaction in cognitive development. Learning happens more effectively when learners interact with "more knowledgeable others," including adults and peers in the community.

Gan & Ocampo (2022) explained that community-led reading initiatives involving floating libraries, volunteer mentors, and student-led tutoring greatly improved learners' reading enthusiasm and performance. Similarly, Layam (2024) showed that the implementation of the National Reading Program (2024) was mainly successful because to the joint efforts of teachers, parents, and community leaders who shared a goal for literacy recovery.

In another study, Pocaan (2022) stated that personalized, multisensory strategies reinforced by teachers and family could close reading deficits among Grade 7 students who had fallen behind. Furthermore, the Department of Education has recognized models like Project RED and Basa Ko, Bahagi Ka as standards for community-initiated reading programs that resulted in significant improvements in students' Phil-IRI scores. Furthermore, Anonuevo (2025) found that strong school-family relationships, particularly through home-based reading activities and parent literacy seminars, were positively associated to students' reading comprehension and engagement. These findings confirm that persistent, systematic community cooperation improves not just learners' reading abilities but also develops a culture in which literacy is valued, developed, and collectively supported.

The findings of this study can be used to design focused and adaptive reading programs that address the individual requirements of secondary students based on their Phil-IRI scores. By verifying that community participation improves reading ability, the findings can help to strengthen school-community relationships through initiatives like barangay reading sessions, volunteer mentoring programs, and parent-led home reading activities. These findings can

also be used to shape school policies, particularly those aimed at incorporating community engagement into the School Improvement Plan and Learning Recovery programs. Furthermore, they may direct the creation of literacy training for parents and stakeholders, providing them with basic reading skills to help students at home.

The goal of this study is to assess learners' reading proficiency levels based on their Phil-IRI findings. The study's goal is to offer a more accurate picture of their reading development by assessing their existing reading skills and shortcomings. It also looks for and recommends relevant and interesting activities that might help pupils develop their reading abilities. These exercises may involve tactics tailored to their learning styles and individual reading issues. Finally, the researcher intends to improve learners' overall reading performance through focused interventions.

Literature Review

This study identifies the role of local stakeholders, such as parents, and community leaders, in fostering a learning environment. Takeuchi (2015) stated that peer tutoring is recognized as a crucial component of Western higher education institutions, considerably contributing to students' academic success. The notion of students teaching and learning from their peers is well recognized for its benefits. Peer tutoring is a proven method for improving academic achievement in numerous topics, particularly reading comprehension.

According to William, Funmilayo, & Favour (2025) research shows that programs that involve trained community volunteers — whether older peer-students, local adult volunteers, or non-formal facilitators — consistently show positive reading gains when properly structured. Research in the Philippines indicated that community-based literacy programs significantly improved primary learners' reading skills through guided reading sessions, progress tracking, and local engagement.

Furthermore, Guven (2023) and Chimbutane (2025) found that socio-emotional and community variables have an important role in improving literacy results. Their research demonstrates that students who are exposed to emotionally supportive environments—where parents promote reading and community members reaffirm its value—develop better intrinsic drive to read and maintain interest over time. In such situations, reading becomes a social practice rather than a simply academic endeavor. Positive reinforcement from numerous

sources (teacher, parent, community) boosts learner confidence, tenacity, and readiness to tackle challenging texts, leading to demonstrable gains in comprehension and fluency.

Research Questions

This study aimed to offer a more accurate picture of their reading development by assessing their existing reading skills. Specifically, it sought to answer the following questions:

1. What is the current reading proficiency level of the Grade 10 learners based on their Phil-IRI results?
2. How can community collaboration improve the reading proficiency of Grade 10 learners?
3. What other activities may be offered to improve learner's reading proficiency level?

METHODOLOGY

The participants of this study were Grade 10 learners of Natalia V. Ramos Memorial Integrated School for the school year 2024-2025. All enrolled learners participated in the Phil-IRI assessment to determine their respective reading levels – Independent, Instructional or Frustration. Those identified under frustration level became the primary focus of the intervention program

The study utilized several instruments and materials to gather both quantitative and qualitative data effectively. The Philippine Informal Reading Inventory served as the primary tool for assessing learner's reading proficiency level through graded passages that measured both word recognition and comprehension. An interview guide containing structured and open-ended questions was used to obtain learner's insight and experiences regarding community involvement and reading activities. To ensure accurate documentation and analysis of responses an audio recording device was employed during the interview session. Additionally consent forms were distributed to participants and their parents or guardians to secure informed and voluntary participation thereby ensuring the ethical conduct of this study.

The researcher first administered the Phil-IRI to all grade 10 learners to establish a baseline of their reading proficiency levels. Results were categorized into independent instructional and frustration levels. Following this, coordination was made with school administrators and subject teachers and learners to

introduce the objectives of the study and solicit their participation consent letters were distributed and retrieved prior to data collection.

Research design

This study employed a mixed method research design, integrating both quantitative and qualitative approaches to comprehensively examine the role of community engagement and enhancing the reading competence among Grade 10 learners. The quantitative component focuses on analyzing the Philippine Informal Reading Inventory (Phil-IRI) results to determine the learner's reading proficiency levels while the qualitative components explored the learner's perception and experiences regarding the community collaboration in improving reading skills. The integration of both methods provided a holistic understanding of the current reading proficiency status and the impact of community-based interventions.

Research instruments

The PHIL-IRI results were collected from the language teachers. Learners' reading levels were described as Independent (learners who scored 97-100% in word recognition and 80-100% in comprehension), Instructional (learners who scored 90-96% in word recognition and 59-79% in comprehension) and Frustration (learners who scored 90-96% in word recognition and 59-79% in comprehension).

In collections of data, the researcher sent a letter outlining the purpose and objectives of the study. With granted permission, the researcher prepared the research questions. The teacher-researcher also prepared an audio recording device to better record the answers of the respondents. The researcher clearly stated the study's purpose and provided instructions for completing the survey in the first section, along with a statement about the confidentiality of responses in the final section. Each respondent was given a consent letter for their approval of willingness to participate to answer the form. All information that was recorded and was secluded for their confidentiality. The researcher recognized that respondents' awareness might influence their honesty and effectiveness in answering the questions

Data Analysis

The collected data and information were compiled and organized systematically. It was then tabulated for clarity and analysis. The study employed the following data analysis plan.

Frequency count. This was used to verify the number of responses in each item.

Percentage. This was utilized to determine the points and range of the scores of the respondents. It also corresponds to the number or rate that is expressed as a certain number of parts of something or as a whole.

Coding. This was used to find themes, patterns, and key concepts within the data.

Categorizing. This was utilized for organizing the transcribed data. Spreadsheet is used to categorize the data.

Interpretation and Theme Development. These were used to understand the meanings, experiences, and perspectives captured in the qualitative data. This step involves delving into the "why" behind the "what" revealed in the data.

RESULTS AND DISCUSSION

1. Reading Proficiency Level of Grade 10 Learners based on the PHIL-IRI Results

Table 1

PHIL-IRI Individual Graded Passages Results

Sections	Number of Students	Independent		Instructional		Frustration	
		f	%	f	%	f	%
1	46	17	36.96	25	54.35	4	10.82
2	46	25	54.35	18	39.13	3	5.52
3	44	14	30.43	25	56.82	5	16.43
4	44	30	65.22	12	27.27	2	3.07
5	48	23	50.00	20	41.67	5	10.00
6	47	15	32.61	30	63.83	2	6.13
7	44	18	39.13	23	52.27	3	7.67
Total	**319**	**144**	**316.34**	**163**	**335.34**	**24**	**59.63**

Table 1 shows the reading competence levels of 319 Grade 10 learners based on their PHIL-IRI scores, which are divided into Independent, Instructional, and Frustration levels. The majority of learners (51.10%) are classed as Instructional readers, suggesting that they need direction to completely grasp reading content, while 45.14% are independent readers, indicating high reading skills. There are

7.52% of learners are at the Frustration level, indicating that they struggle considerably with reading and require additional help.

3. Activities may be offered to improve learner's reading proficiency level

This research served as baseline data to create a project or program to improve the reading proficiency level of the learners. The implementation of the reading intervention program "Read to Succeed: A Community Collaboration for Reading Success" may be offered to improve the learner's reading proficiency level. For this project, the community's role must strengthen.

Action Plan

Read to Succeed: A Community Collaboration for Reading Success

Objectives	Activities	Persons Involved	Time frame	Expected Output
Identify learners' reading level	• Administer PHIL-IRI (Pretest) to all Grade 10 students to identify those struggling with comprehension.	All English and Filipino Teachers	Week 1 of Quarter 1	Baseline data on learners' reading levels
Conduct program orientation for English and Filipino Teachers	• Conduct training for teachers for the Read to Succeed project • Specify procedures for tracking progress, providing feedback.	All English and Filipino Teachers	Week 1 of Quarter 1	Learners' Progress Monitoring Sheet
Strengthen learners' foundational reading skills	• Conduct the project Read to Succeed • Introduce the program to struggling readers. • Implement a daily 15-minute reading routine,	Learners and English Teachers Parents Barangay officials Learners	Every Wednesday and Friday	Improved daily reading engagement

	the Drop Everything and Read (DEAR) • Promote community involvement in reading. Learners will have a guided reading session with Parents, barangay officials. • Learners will have their reading partner called Reading Buddies			
Progress Monitoring	• Conduct bi-monthly assessments to track learners' improvement. • Provide feedback to students on their progress, highlighting areas of improvement and growth.	All English and Filipino Teachers	Bi-monthly (Every second and 4th week of the month)	Progress monitoring tools
Final Evaluation	• Conduct a post-test to measure overall improvement. • Compare results with the baseline evaluate the program's effectiveness.	Learners All Filipino and English Teachers	Quarter 4	Evaluation Results

Reflection	• Write a report outlining the Read to Succeed project results, achievements, and difficulties. • Determine what needs to be improved going forward, get input from parents, instructors, and students.	English Teachers	Quarter 4	Report of Read to Succeed

2. Community collaboration improves the reading proficiency of Grade 10 learners

Theme 1: Volunteer and Peer Support

The replies obtained from learners emphasize the importance of community engagement in improving reading competence among Grade 10 learners. One common topic is the importance of tutoring and mentoring offered by community volunteers and older peers. Learners stated that having accessible and approachable support networks in their communities motivates them to read more confidently and consistently.

One learner stated that "Maari pong makatulong ang community sa pagpapa-improve ng aming pagbasa dahil mayroon po mga tao/volunterr na tutulong sa amin para mag-practice ng pagbasa". This demonstrates how volunteer-led reading groups held after school hours provide opportunity for further practice in a less formal context. Such assistance helps to overcome learning gaps that cannot be adequately addressed in the classroom alone.

Another learner added "Kapag may mga kuya o ate po na gumagabay sa amin, mas nagiging confident kaming magbasa at magtanong kapag may hindi kami maintindihan." This implies that peer-assisted learning, particularly from somewhat older youth mentors, decreases anxiety while increasing learner confidence. It also develops a culture of shared responsibility in education, where students feel secure to discuss their difficulties and seek assistance.

Theme 2: Encouragement and Motivation

This study found that emotional support and motivation from a unified community considerably boost learners' reading competence. Learners understand that when stakeholders such as parents, teachers, and barangay officials collaborate, they feel more motivated and appreciated in their academic path.

One learner shared, "Mas gaganahan po akong magbasa kapag nararamdaman ko po ang suporta ng aking mga magulang... ng mga taong nakapaligid sa akin." This shows that a supportive environment in which many segments of the community are visibly active encourages students to take more seriously reading assignments. The engagement of various stakeholders conveys a clear message that reading is more than simply a school obligation, but a shared priority.

Another learner stated that, "Kapag nakikita namin na mga tao sa paligid namin ay involved sa pagkatuto namin, nafi-feel naming importante ang kami at ang pagbabasa, kaya mas nagsusumikap kami." This demonstrates how visible community participation not only emphasizes the value of reading but also motivates learners to develop. When learners perceive that those around them care about their development, it boosts their feeling sense of purpose and motivation to succeed.

These data underscore that, in addition to academic treatments, emotional and motivational elements of learning, which are fostered via community participation, play an important role in increasing reading competency among Grade 10 students. This research supports the premise that a learner's environment has a significant impact on their engagement and academic development.

CONCLUSION

The data gathered showed that while a significant portion of learners were at the independent level and Instructional level, an important group remained at the Frustration level, highlighting the need for targeted reading interventions. Moreover, most of the learners reveal that community collaboration enhances the reading proficiency of Grade 10 learners through volunteer and peer support. Peer tutoring and mentoring from community members help learners gain confidence and solve reading issues outside of the classroom. The gathered data demonstrate that community support, both intellectual and emotional, is critical in improving

learners' reading abilities and overall learning engagement. In response to these needs, the reading intervention program "Read to Succeed: A Community Collaboration for Reading Success" may be offered to improve the learner's reading proficiency level.

RECOMMENDATIONS

It is recommended that teachers shall conduct focused and intensive reading interventions, such as small-group tutorials, one-on-one coaching, and differentiated instructional materials catered to their reading abilities for the number of students at the Frustration level. Regularly track their progress using formative assessments. Schools should keep up and grow their volunteer and peer-support initiatives by involving parents, barangay officials and youth organizations in mentoring, and regular reading sessions that boost students' self-esteem and deal with reading issues outside of the classroom. Furthermore, launch and implement the "Read to Succeed: A Community Collaboration for Reading Success" program, making sure it incorporates community-led reading sessions, organized reading activities, and ongoing collaborations with local stakeholders to give students regular chances for practice and development outside of the classroom.

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READING ENGAGEMENT AND DEVELOPMENT AMONG BCIHS YOUTH THROUGH STRUCTURED READING ACTIVITIES

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Abstract: This study aimed to strengthen students' reading proficiency through *Project R.E.A.D.Y. (Read Every Friday Activities Designed for You)* a structured and engaging reading intervention aligned with the MATATAG Curriculum and the National Reading Program. Using a descriptive-qualitative design, data were gathered from ten English teachers of Batangas City Integrated High School through guided interviews, which informed the design and refinement of reading templates and Daily Learning Logs. Findings revealed that teachers faced challenges in aligning reading activities with the DLL and emphasized the need for contextualized and systematic plans to improve implementation. The study concluded that consistent, structured reading sessions significantly enhanced learners' reading engagement and comprehension. It is recommended that schools develop contextualized R.E.A.D.Y. Friday activities, establish a standardized integration format within the DLL, and institutionalize a comprehensive R.E.A.D.Y. Friday Plan to ensure sustainability and alignment with DepEd's thrust toward quality, inclusive, and literacy-centered education.

Keywords: reading intervention, Project R.E.A.D.Y., descriptive-qualitative research, literacy development, Daily Learning Log integration

INTRODUCTION

Literacy remains a cornerstone of educational success and social progress, yet it continues to be one of the most pressing challenges in the Philippines. In alignment with the MATATAG reading curriculum, Batangas City Integrated High School (BCIHS) reinforces its commitment to improving students' reading skills through structured and engaging literacy interventions. Guided by the Department of Education's (DepEd) National Reading Program, this initiative reflects the school's active response to national efforts to strengthen foundational

learning. Central to this program is a structured reading plan crafted by the School Reading Coordinator, divided into three essential stages: Pre-Reading, During Reading, and Post-Reading, each designed to foster comprehension, engagement, and critical literacy.

The researcher observed that many students struggle with reading comprehension and often lack motivation to engage with texts beyond the classroom. This personal experience as a teacher highlighted the need for interventions that are both structured and enjoyable, prompting a closer examination of BCIHS's literacy programs.

The study draws upon the theoretical framework of scaffolding and constructivist learning, emphasizing that reading development occurs through purposeful support and interactive experiences. It examines the design, implementation, and impact of the school's reading template, including the resources and strategies that sustain effective literacy instruction. This exploration is grounded in national directives, particularly DepEd Memorandum No. 001, s. 2024, and Regional Memorandum No. 43, s. 2024, which affirms that every Friday shall be dedicated to focused reading instruction, a directive that symbolizes both urgency and commitment.

Globally and nationally, data reveal a growing literacy crisis. According to the World Bank, nine out of ten Filipino children aged ten struggle to read simple texts, an increase from seven out of ten before the COVID-19 pandemic. Similarly, the 2022 Program for International Student Assessment (PISA) reported that only 24 percent of 15-year-old Filipino learners achieved basic reading proficiency. These statistics underscore the need for systematic and sustained literacy interventions in schools.

In response, Batangas City Integrated High School launched R.E.A.D.Y. Friday: Reading Engagement and Development Among BCIHS Youth Through Structured Reading Activities, a localized literacy initiative aligned with national education goals. The program aims not only to enhance reading fluency and comprehension but also to restore students' love for reading through enjoyable, meaningful, and differentiated activities. By transforming every Friday into a celebration of literacy, the initiative aspires to bridge learning gaps, empower young readers, and ensure that every child advances toward reading proficiency with confidence and purpose.

Literature Review

Reading is the foundation of all learning. It supports comprehension in every subject, from mathematics to science and social studies. Luistro (2012, as cited in Paz, 2018) emphasized that failure to develop reading skills early leads to lasting academic difficulties. Current data highlight the gravity of this issue. The World Bank (2023) reported that nine out of ten Filipino children aged ten cannot read simple texts, while PISA (2022) showed that only 24% of fifteen-year-olds reached basic reading proficiency. These figures show the urgent need for stronger reading instruction.

The COVID-19 pandemic widened existing literacy gaps, especially for learners with limited access to online learning. Oseña-Paez (2022) observed that disrupted schooling weakened students' foundational skills. Balinbin (2020) also found that Filipino students continued to lag other Southeast Asian countries in literacy and numeracy. These challenges reveal the need for structured reading programs that improve both skill and motivation among learners.

Research shows that structured and engaging reading programs help improve comprehension. Bernardo (2019) found that guided activities enhanced students' understanding and interest in reading. Martinez (2021) reported that interactive, level-based strategies boosted motivation and confidence. Aquino and Santos (2020) further noted that integrating reading plans into Daily Learning Logs (DLLs) helped teachers align lessons with learning goals and monitor progress effectively.

The Department of Education responded to the reading crisis through programs such as Catch-Up Fridays (DepEd Memorandum No. 001, s. 2023) and Executive Order No. 001, s. 2024, which designated Fridays for reading and values formation. These policies aim to restore foundational skills and encourage nationwide reading culture. Batangas City Integrated High School supported this through Project R.E.A.D.Y. Friday, which uses pre-reading, during-reading, and post-reading stages to guide learners and sustain their interest in reading.

Building a reading culture requires consistency and enjoyment. Aquino and Santos (2020) emphasized that contextualized and engaging reading plans motivate both teachers and students. Programs like Project R.E.A.D.Y. Friday show that regular, structured activities can rekindle students' love for reading and strengthen their literacy skills.

Synthesis

The reviewed studies highlight that reading is central to learning and must be strengthened through structured, engaging, and consistent programs. Evidence supports the effectiveness of guided reading plans, contextualized materials, and teacher collaboration. Within this context, Project R.E.A.D.Y. Friday offers a timely and relevant approach to developing reading proficiency and promoting lifelong learning among students.

Research Questions

The following research questions were set to answer.

1. How does the school reading program enhance its reading culture?
2. What are the challenges met by the reading teachers in crafting a reading activity plan?
3. What measure/s may be taken to enhance the reading skills of the learners of Batangas City Integrated High School?

METHODOLOGY

This study employed a systematic three-phase process consisting of Preparation, Development, and Validation stages.

In the Preparation Stage, the initial research framework was conceptualized and drafted to ensure alignment with the objectives of the school's reading enhancement initiative. Essential research documents—including the interview guide, request letters for administrative approval, and the formal communication for data collection—were also prepared. These instruments established both the ethical standards and procedural groundwork necessary for conducting the study responsibly.

The Development Stage centered on the design and refinement of the intervention materials. Customized reading templates and structured activities were created in accordance with the established framework of the School Reading Program, particularly tailored for the "Reading Friday" sessions. Throughout this process, revisions were made to enhance learner engagement, instructional relevance, and teacher convenience. The adjustments made during this stage ensured that the intervention was context-sensitive and effectively addressed the reading needs of the students.

Finally, the Validation Stage involved a thorough review of the completed materials to ensure their quality, applicability, and coherence. The English

Department Head provided constructive feedback, which was carefully integrated into the final version. The revised outputs were subsequently evaluated and approved by the School Principal, confirming their readiness for pilot implementation and classroom application.

To complement this, a qualitative component was incorporated to identify potential interventions and strategies that address these difficulties. Data were gathered through structured interviews with selected respondents, allowing the researcher to capture in-depth perspectives and contextual insights. Ten English teachers from Batangas City Integrated High School served as key informants, chosen based on their active involvement in reading instruction and remediation. Their experiences, observations, and recommendations provided valuable input in formulating practical responses to the identified issues.

Research design

The study adopted a descriptive survey design to examine the reading challenges faced by students of Batangas City Integrated High School. To complement this, a qualitative approach was employed to identify potential interventions and strategies addressing these difficulties. Data were collected through structured interviews with ten English teachers selected as key informants, providing valuable insights based on their direct experiences in facilitating reading instruction. This combination of quantitative and qualitative methods enabled the researcher to capture both the scope of the learners' reading problems and the depth of teachers' perspectives on effective solutions.

Research instruments

The interview guide served as the main instrument for data collection. It was composed of open-ended questions intended to elicit the perspectives and experiences of English teachers regarding the implementation of structured reading activities under the R.E.A.D.Y. Friday program. The questions were formulated to explore teachers' practices, encountered challenges, and insights on improving reading interventions. This qualitative tool ensured that participants could freely express their reflections while allowing the researcher to capture detailed and contextual responses.

To ensure content validity, the interview guide underwent expert review by the English Department Head and two members of the District Research Committee, who provided recommendations for clarity, relevance, and alignment

with the research objectives. Revisions were incorporated based on their feedback before the instrument's final administration.

In addition to the interview guide, a validation checklist was employed during the development of instructional materials such as the reading activity plan and Daily Learning Log templates. This checklist, grounded in the Department of Education's MATATAG Curriculum standards, evaluated the materials based on clarity, alignment with competencies, learner engagement, and applicability. The review process was completed by a panel consisting of the School Principal, Department Head, and Reading Coordinator, ensuring both academic and administrative approval.

The reliability of the instruments was established through consistency in the interview responses and expert validation. Data collected were cross-checked and thematically analyzed to maintain accuracy and coherence. Through these tools, the study ensured that the findings reflected authentic classroom realities and provided a sound basis for enhancing structured reading interventions within the R.E.A.D.Y. Friday framework.

Data Analysis

The study was carried out in three key phases: Preparation, Development, and Validation. Each stage followed a structured sequence to ensure that the gathered information was comprehensive and aligned with the objectives of Project R.E.A.D.Y. (Reading Engagement and Development Among BCIHS Youth).

During the Preparation Phase, the researcher organized the groundwork by designing the research framework and preparing essential documentation such as interview guides, consent forms, and formal communication letters for administrative approval. These preliminary steps ensured compliance with institutional and ethical standards and facilitated the smooth conduct of the study.

The Development Phase centered on the creation and refinement of the intervention materials. The researcher crafted a series of reading activity templates and instructional plans anchored in the MATATAG Curriculum and the School Reading Program framework. These materials were customized to suit the "Reading Friday" sessions and were continuously revised based on the emerging feedback from respondents to improve their clarity, engagement value, and instructional applicability. This stage emphasized collaboration with English

teachers, whose insights were vital in identifying effective strategies for enhancing reading proficiency.

In the Validation Phase, the developed outputs underwent evaluation by designated academic authorities. The English Department Head reviewed the materials for accuracy, pedagogical soundness, and alignment with existing DepEd guidelines, while the School Principal confirmed their readiness for school-wide application. Adjustments were made based on their recommendations before final approval and pilot use. This ensured that all instruments adhered to both educational standards and research ethics.

The study employed structured interviews as the main data collection tool, engaging ten English teachers from Batangas City Integrated High School as key informants. Their perspectives provided valuable qualitative insights on the challenges of crafting reading activity plans and on the effectiveness of the proposed R.E.A.D.Y. framework. Responses were carefully recorded, organized, and coded to identify recurring patterns and themes relevant to the study's research questions. These qualitative data were then synthesized and analyzed descriptively to draw meaningful interpretations.

To maintain data integrity and confidentiality, all participants were briefed on the purpose of the study, and their voluntary participation was secured through written consent. Anonymity was preserved by omitting any personal identifiers in the final documentation. Furthermore, triangulation was applied by cross-referencing teacher responses with existing reading program outputs and administrative feedback, ensuring that interpretations were well-grounded and balanced.

The entire data gathering process was conducted over a three-month period, beginning with the preliminary consultation in February 2025 and culminating with the final validation in April 2025. This structured timeline allowed sufficient opportunity for revision, refinement, and reflection, ensuring that the final intervention materials represented both teacher input and institutional standards.

In summary, the data analysis procedure combined qualitative inquiry and descriptive interpretation to generate a comprehensive understanding of how structured reading activities could strengthen students' engagement and proficiency. By grounding the research in teacher collaboration, systematic evaluation, and ethical transparency, the study ensured that its findings were

both credible and applicable to the broader goal of enhancing reading instruction across the school community.

RESULTS

This analysis highlights the themes that emerged from the qualitative analysis.

1. *Structured Reading Programs as Catalysts for Reading Culture*

The findings from the interviews indicate that the School Reading Program (SRP) at Batangas City Integrated High School has played a significant role in cultivating a positive reading culture. The program's design emphasizes structured, learner-centered, and evidence-informed strategies, reflecting DepEd's commitment to strengthening foundational literacy across all grade levels. Participants highlighted the effectiveness of initiatives such as **Brigada Pagbasa**, **Drop Everything and Read (DEAR)**, **Silent Reading Intervention**, **Phil-IRI–based instruction**, **Reading Remediation Classes**, **Catch-Up Friday**, and the **Reading Camp** in fostering learners' interest, engagement, and sustained motivation to read. These interventions were recognized as purposeful and responsive, catering to students' diverse reading abilities while supporting the development of essential literacy skills, including decoding, comprehension, and reading fluency. Collectively, these efforts not only enhanced learners' reading performance but also contributed to a school climate where consistent, meaningful, and enjoyable reading experiences are valued and promoted.

"The school has established a wide range of structured and purposeful reading activities… Brigada Pagbasa, DEAR, Silent Reading Intervention, Phil-IRI, Reading Remediation Classes, Catch-Up Friday, and Reading Camp, which have significantly motivated students to read and improved their literacy skills."

2. *Differentiated Support for Diverse Reading Levels*

Teachers highlighted the importance of addressing the varying reading abilities of students, reflecting DepEd's advocacy for differentiated instruction and inclusive learning. To support this, the school has implemented targeted strategies, including the assignment of a dedicated reading teacher for learners who need additional assistance. Learning Support Aides (LSAs) and Reading Coordinators actively participate in monitoring progress, offering coaching, and providing tailored guidance to students. These initiatives enhance the Reading

Program by ensuring that both remediation and enrichment activities are carefully designed to be developmentally suitable, informed by learner data, and responsive to the unique needs of each student.

> *"A special reading teacher was hired to teach struggling readers, while Learning Support Aides (LSAs) and Reading Coordinators assist in monitoring and guiding them."*

3. *Interactive and Collaborative Reading Approaches*

Informants emphasized that reading habits are significantly strengthened through peer-assisted strategies such as reading buddies and paired tutoring. These interactive and collaborative approaches align with DepEd's thrust toward learner-centered and inclusive instruction. By allowing learners to read, interact, and process texts with peers, these strategies make reading a socially engaging experience that increases motivation, builds confidence, and supports deeper comprehension.

> *"Reading habits are developed through interactive approaches such as peer reading buddies and paired tutoring systems."*

4. *Integration of Technology and Innovative Practices*

Teachers and learners consistently highlighted initiatives such as the E-Readers Program and the Reading Camp as highly engaging and effective in enhancing students' reading comprehension. These programs contribute significantly to the school's literacy development by providing well-structured, enjoyable activities that encourage active participation. By integrating digital tools, these initiatives also reflect DepEd's commitment to 21st-century learning, offering interactive, accessible, and learner-centered reading experiences that cater to the evolving needs of today's students.

> *"Innovations like the E-Readers Program and Reading Camp were described as enjoyable and effective means of promoting comprehension and engagement."*

5. *Institutionalization of Reading as a School Culture*

Reading has been firmly integrated into the school's culture, reflected in consistent initiatives and routine reminders. Programs like National Reading Month and Catch-Up Friday highlight the value of reading as both an essential

skill and a lifelong habit, promoting engagement that extends beyond formal classroom instruction.

> *"Reading has become part of the school's culture, with National Reading Month and Catch-Up Friday serving as regular reminders that reading is both a skill and a lifelong practice."*

6. *Difficulty in Designing Engaging and Differentiated Reading Tasks*

Respondents highlighted the challenges in developing reading activity plans that effectively address the needs of diverse learners. They noted difficulties in selecting reading materials that are appropriately leveled for each grade and in designing tasks that sustain student engagement while avoiding redundancy. This underscores the importance of differentiated instruction and thoughtfully structured reading programs, in line with DepEd's mandate to provide inclusive and learner-centered education.

> *"Designing engaging and differentiated reading tasks can be difficult due to several factors. Many teachers cited the difficulty of finding appropriate and level-suited reading materials for each grade level… crafting lesson plans that maintain student engagement without seeming repetitive was identified as a challenge."*

7. *Lack of Clear Guidelines and Adequate Resources*

Teachers observed that the initial implementation of programs such as Catch-Up Friday presented challenges due to the lack of standardized formats and clear guidance for preparing Daily Lesson Logs (DLLs). The absence of detailed templates, limited access to instructional materials, and unclear references contributed to increased difficulty in planning and delivering lessons effectively.

> *"During the initial implementation of Catch-Up Friday, there were no specific formats or clear guidelines to follow, which caused confusion in developing Daily Lesson Logs (DLLs)… insufficient materials, vague templates, and the absence of concrete references made planning more demanding."*

8. *Limited Time and Professional Support*

The respondents emphasized that limited time, often caused by overlapping school activities and demanding workloads, poses a significant challenge to the regular and effective implementation of reading programs. Additionally, they identified the insufficient provision of specialized training and instructional materials for supporting non-readers and learners who struggle with reading as a key barrier to enhancing literacy outcomes.

> *"Some found the process of planning to be time-consuming, especially with overlapping school activities and limited preparation time… Teachers also pointed out the lack of training and resources, particularly for teaching non-readers or slow readers, as one of the major obstacles."*

9. *Strengthening Program Integration and Sustainability*

Respondents recommended incorporating Catch-Up Friday into the School Reading Action Plan (SRAP) to promote consistent implementation, secure necessary resources, and strengthen alignment with the school's literacy objectives. This proposal underscores the importance of institutional backing in maintaining and enhancing reading programs, ensuring that learners' reading development is systematically supported.

> *"They recommended the integration of Catch-Up Friday into the School Reading Action Plan (SRAP) to ensure its continuity, funding, and alignment with the school's literacy goals."*

10. *Enhancing Teacher Capacity and Resource Availability*

The teachers underscored the critical role of ongoing professional development in strengthening reading instruction, especially in addressing the needs of learners who struggle with reading or are non-readers. They further pointed out that providing diverse, age-appropriate, and engaging reading materials is essential to enhance the effectiveness of reading programs and foster a positive learning environment.

> *"The respondents also emphasized the importance of teacher training and professional development in reading instruction, especially for those handling struggling and non-readers. Providing more age-appropriate and engaging reading materials was also deemed essential."*

11. *Promoting Collaborative and Community-Based Approaches*

The respondents highlighted that strategies such as peer tutoring, structured home reading activities, and dedicated library periods significantly increase learners' opportunities to engage with texts and strengthen their reading skills. Additionally, they underscored the importance of active parental participation and collaboration with community initiatives, such as Brigada Pagbasa, as essential motivators that reinforce a culture of reading within and beyond the classroom.

> *"Several teachers proposed intensifying peer tutoring, home reading activities, and library hours to give students more opportunities to practice reading… respondents recognized the vital role of parental involvement and community partnerships, such as Brigada Pagbasa, in strengthening learners' motivation to read."*

DISCUSSION

This research advances three important implications:

1. *Embedding structured, sustained, and inclusive reading activities into the school's institutional practices.*

The findings reveal that the School Reading Program (SRP) of Batangas City Integrated High School has significantly strengthened its reading culture through structured activities such as Brigada Pagbasa, Drop Everything and Read (DEAR), Silent Reading Intervention, Reading Remediation, and Catch-Up Friday. These initiatives provide consistent opportunities for purposeful reading and foster enthusiasm among learners. The program's inclusivity—through Reading Camps, peer tutoring, and the hiring of a special reading teacher—ensures that struggling readers receive targeted support. This approach aligns with DepEd's Brigada Pagbasa Initiative (DepEd Order No. 173, s. 2019), which emphasizes community-driven efforts to promote literacy and lifelong learning. Overall, the SRP embeds reading as a habit and a shared school-wide priority, contributing to functional literacy and sustained engagement.

2. *Professional Development and Resource Provision as Key Needs for Effective Reading Activity Planning*

The challenges faced by reading teachers in crafting activity plans imply the need for capacity-building training, resource development, and administrative support to sustain the effectiveness of the School Reading Program (SRP). Without adequate materials, clear guidelines, and sufficient preparation time, teachers struggle to design engaging and differentiated activities, which may hinder literacy progress. This is supported by the study of Baldevarona (2020) where teachers often encounter a lack of resources, insufficient training, and time constraints when preparing reading interventions, leading to inconsistencies in lesson delivery. Similarly, Tolentin (2023) reported that heavy workloads and unclear guidelines significantly affect the success of reading programs, recommending improved resource provision and professional development. These studies underscore the importance of structured support systems in overcoming planning challenges and ensuring program sustainability.

3. *Strengthening School Reading Programs Through Systematic Interventions and Stakeholder Engagement*

Enhancing learners' reading skills at Batangas City Integrated High School requires a comprehensive approach that combines structured interventions, teacher training, and community involvement. Measures include institutionalizing Catch-Up Friday within the School Reading Action Plan (SRAP), providing professional development for teachers, intensifying peer tutoring and home reading programs, and conducting Reading Camps and Remediation Classes for struggling readers. Strengthening parental engagement and partnerships through initiatives like Brigada Pagbasa ensures broader support for literacy development.

These findings imply that improving reading skills depends on collaborative strategies beyond classroom instruction, fostering a culture of lifelong learning. Recent studies affirm these measures: Bullos et al. (2023) reported that individualized instruction and multisensory activities under the National Reading Program improved phonics and fluency despite resource limitations, while Tomas et al. (2021) emphasized contextualized programs and stakeholder involvement as key to addressing reading difficulties. DepEd's Brigada Pagbasa (2021) further highlights the role of community partnerships in sustaining literacy engagement.

CONCLUSION AND RECOMMENDATIONS

The study concludes that while the School Reading Program (SRP) at Batangas City Integrated High School already incorporates structured and multilevel activities that promote a strong reading culture, persistent challenges such as limited resources, time constraints, and the absence of standardized formats for initiatives like R.E.A.D.Y. Friday hinder its full effectiveness. These findings highlight the need for a coherent and institutionalized reading framework that integrates all existing programs, ensures systematic implementation, and provides clear guidelines for teachers. A comprehensive, contextualized, and well-supported reading plan is essential to address diverse learner needs and strengthen reading proficiency.

It is recommended that the school develop and institutionalize a standardized R.E.A.D.Y. Friday format within the Daily Lesson Log to ensure consistency and ease of implementation. A structured reading plan should be crafted and made accessible to teachers as a guide for planning, executing, and assessing reading activities. Professional development programs must be sustained to equip teachers with strategies for differentiated instruction, while adequate and age-appropriate reading materials should be provided. Finally, collaboration among administrators, teachers, parents, and community partners—through initiatives like Brigada Pagbasa—should be strengthened to maintain engagement and support continuous improvement in learners' reading performance.

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SCHOOL HEADS' INSIGHTS ON HEALTH AND NUTRITION PROGRAM DELIVERY IN BATANGAS CITY SCHOOLS DIVISION

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Abstract: This study explored the implementation of the Oplan Kalusugan sa DepEd (OKD) program within the Batangas City Schools Division, focusing on school heads' perspectives in delivering health and nutrition services to learners. Employing a qualitative-descriptive design, data were gathered from 23 school heads using structured interviews. The findings highlighted several challenges, including limited budget, shortage of health personnel, inadequate infrastructure, and variations in program practices, which affected the delivery of services. In addition, strong stakeholder engagement, active community participation, and the presence of clear policies were identified as key factors facilitating implementation. The study suggests that enhancing resources, building personnel capacity, and fostering collaboration can strengthen the program's impact on student health and holistic development. Recommendations include deploying additional health professionals, improving infrastructure, incorporating mental health support, and reinforcing partnerships to promote sustainable program implementation.

Keywords: Capacity Building, Health and Nutrition, *Oplan Kalusugan*, Program Implementation, Stakeholder Collaboration

INTRODUCTION

Health and nutrition are crucial to students' learning, participation, and overall development. When learners are healthy and well-nourished, they are better able to sustain attention, perform academically, and engage meaningfully in school. In the Philippines, children continue to face the *"triple burden of malnutrition,"* where undernutrition, micronutrient deficiencies, and rising overweight rates coexist (UNICEF Philippines, 2024). These challenges affect not

only learners' physical health but also their ability to thrive academically and socially.

In CALABARZON, similar concerns are likewise evident. School-based nutrition programs such as the School-Based Feeding Program (SBFP) and LHEARN have produced notable improvements in learner health and attendance, demonstrating that carefully monitored interventions can yield positive outcomes (National Nutrition Council CALABARZON, 2021). However, regional evaluations also highlight that local conditions, resource availability, and program implementation variations can influence the effectiveness of these initiatives, emphasizing the need for localized assessments (DepEd, 2021; Tabunda et al., 2016).

Within the Batangas City Schools Division, all public elementary schools implement SBFP under Oplan Kalusugan sa DepEd (OK sa DepEd). Despite this comprehensive coverage, height–weight monitoring continues to identify undernourished and overweight learners, while post-pandemic trends suggest a slight increase in overweight cases (Department of Education, 2022). Monitoring reports reveal recurring challenges, including delayed deliveries, occasional quality concerns in Nutritious Food Products and milk, limited manpower as teachers balance instructional and program duties, and varying levels of parent and community engagement (Commission on Audit, 2021). These issues indicate that program presence alone does not guarantee optimal nutrition outcomes.

Given these circumstances, exploring the implementation of OK sa DepEd through the perspectives of school heads is particularly valuable. As the primary decision-makers and supervisors in school operations, school heads possess firsthand knowledge of program coordination, resource management, staff engagement, and community involvement (Torres, Abugan, Ouano, Japinan, Peranco, & Ampil, 2024). Their insights can reveal not only the challenges and limitations faced in program delivery but also the enabling factors that contribute to effective implementation. Therefore, this study specifically focused on school heads to identify issues, challenges, and best practices in delivering health and nutrition programs, and to provide evidence-based recommendations for strengthening services, ensuring that all learners receive the care and support necessary for optimal academic and personal development.

Literature Review

A range of published studies and related reports was reviewed to inform the operational framework and interpretation of the findings.

Fundamental of Health and Nutrition Programs

Health and nutrition programs play a key role in promoting learner well-being, preventing disease, and supporting academic performance among Filipino students. At the national level, the Philippine Plan of Action for Nutrition (PPAN) provides a framework to address undernutrition, micronutrient deficiencies, and rising overweight rates. Programs such as Oplan Kalusugan sa DepEd (OK sa DepEd) bring together major school health initiatives, including the School-Based Feeding Program (SBFP), Water, Sanitation, and Hygiene (WinS), and mental health services, offering a comprehensive approach to learner care (DepEd, 2022). Evaluations show that these programs improve nutritional status and school attendance, but challenges in logistics, manpower, and program sustainability continue to limit their effectiveness (Tabunda, Albert, & Angeles-Agdeppa, 2016).

In addition. the design and success of these initiatives are guided by behavioral change and ecological theories, which highlight the need for both nutrition knowledge and supportive environments at individual, interpersonal, organizational, and policy levels. Models like the Health Belief Model and Social Cognitive Theory ensure that education is paired with enabling conditions for healthy behaviors (Tabunda et al., 2016). Regional efforts, such as CALABARZON's Learning Hub for Enhanced and Revitalized Nutrition (LHEARN) and Batangas City's Comprehensive Child Nutrition Program, strengthen governance and program management (National Nutrition Council CALABARZON, 2019; Batangas City Government, 2022). Despite these measures, height–weight monitoring still reveals undernutrition and overweight cases, while obstacles like delayed food distribution, inconsistent quality of Nutritious Food Products, limited teacher support, and low parent and community engagement remain. Complementary strategies, including Gulayan sa Paaralan and community partnerships, are increasingly recognized as important for sustaining and improving the impact of school-based nutrition programs.

Oplan Kalusugan sa DepEd (OKD)

The implementation of Oplan Kalusugan sa DepEd (OK sa DepEd) in Batangas City reflects the localized application of DepEd Order No. 28, s. 2018,

which integrates flagship programs such as the School-Based Feeding Program (SBFP), Wash in Schools (WinS), Adolescent Reproductive Health (ARH), and School Mental Health Program. Reports from the Bureau of Learner Support Services (BLSS) also confirm that CALABARZON schools, including those in Batangas, sustained OKD activities during pandemic disruptions, highlighting resilience in delivering feeding programs, hygiene initiatives, and mental health support (DepEd, 2022). National studies, such as the Philippine Institute for Development Studies' evaluation of SBFP, have shown improvements in nutritional status and attendance (Tabunda, Albert, & Angeles-Agdeppa, 2016), while more recent research in CALABARZON confirmed positive effects of SBFP on both nutrition and academic performance (Macarandan & Hussien, 2024).

In Batangas City, localized initiatives complement the broader Oplan Kalusugan sa DepEd (OKD) framework by strengthening nutrition governance and program delivery. The city government institutionalized a Comprehensive Child Nutrition Program through Ordinance No. 22-17, s. 2022, which mandates feeding interventions for undernourished children in public day care, kindergarten, and elementary schools, thereby reinforcing DepEd's School-Based Feeding Program at the local level (Batangas City Government, 2022). This ordinance ensures dedicated funding and coordination between schools and local health offices, addressing gaps in resource allocation and sustainability. These localized measures highlight Batangas City's proactive role in embedding OKD principles into city ordinances and regional partnerships, though systematic evaluations of their direct impact on learner outcomes remain limited.

Issues, Challenges, and Limitations in Health and Nutrition Program Delivery

Implementing health and nutrition programs in the Philippines faces numerous challenges, particularly in both rural and urban communities. Socio-economic barriers such as poverty and income disparities significantly limit access to healthcare services and nutritious food, especially in rural areas where households often cannot afford the costs associated with treatment, transportation, or lost work opportunities (Lange et al., 2017). Infrastructure-related issues further compound these challenges. Urban areas, despite having better facilities, struggle with overcrowding and long wait times, while rural communities face inadequate healthcare infrastructure and a shortage of trained health professionals (Reyes et al., 2023). Local health units, such as Barangay

Health Centers (BHCs), are essential for program delivery but often lack sufficient resources, trained personnel, and accountability mechanisms, limiting their overall effectiveness (Reyes et al., 2023).

Cultural and community factors also play a critical role in program success. In some areas, reliance on traditional healers and skepticism toward modern healthcare impede acceptance of health and nutrition initiatives (Reyes et al., 2023). Furthermore, limited community engagement and participation can result in poor program uptake and sustainability (Melo et al., 2024). Despite these obstacles, opportunities exist to improve program delivery through enhanced community involvement, telemedicine, and context-specific health policies tailored to the needs of both urban and rural populations. Addressing the persistent socio-economic, infrastructural, and cultural challenges is vital to ensuring equitable access to health services and achieving better nutritional outcomes across the Philippines.

Factors Contributing to the Success of Program Delivery

The implementation of health and nutrition programs in the Philippines is shaped by several interrelated factors, including governance, coordination, funding, and community engagement. Effective program delivery relies heavily on the capacity of local governance structures to coordinate initiatives and manage resources efficiently. Inadequate coordination at the local level has been identified as a key barrier, with issues in data quality, personnel training, and inter-agency collaboration undermining program effectiveness (Candelario, 2023). Similarly, inconsistent public expenditure on nutrition has limited the reach and impact of interventions, highlighting the need to prioritize funding during critical periods, such as the first 1,000 days of a child's life, when nutrition has the greatest long-term effect (Uy et al., 2023). Proper allocation and mobilization of resources are therefore essential to sustaining nutrition initiatives and ensuring they benefit the intended populations (Uy et al., 2023).

Community engagement further influences program success, as initiatives that emphasize participation, empowerment, and local ownership tend to be more responsive to the specific needs of communities (Co et al., 2018). Despite the importance of governance, funding, and community involvement, challenges persist. Programs must continuously adapt strategies to evolving nutritional requirements, while political instability and administrative changes can disrupt continuity and hinder progress. Addressing these barriers requires a

comprehensive approach that integrates strong governance, active community participation, and sustained financial support, ensuring that health and nutrition programs are both effective and resilient in meeting the needs of Filipino populations.

Research Questions

This study aimed to explore the implementation of OK sa DepEd Program in the Schools Divison of Batangas City. Specifically, this research sought to:

1. Determine the issues, challenges, and limitations encountered by school heads in the delivery of health and nutrition programs;
2. Explore the factors that contribute to the successful implementation of these programs; and
3. Identify intervention strategies necessary to enhance the delivery of health and nutrition programs in schools.

METHODOLOGY

Research design

This study utilized a qualitative-descriptive research design to systematically examine the implementation of health and nutrition programs under the *Oplan Kalusugan sa DepEd (OKD)* initiative. The design allowed for an in-depth exploration of school heads' experiences, insights, and recommendations regarding the delivery of key health services in basic education settings.

Research instruments

A total of 23 school heads participated in the study, each providing detailed insights into the implementation of health and nutrition programs under the OK sa DepEd initiative. Their responses formed the basis for thematic analysis on challenges, success factors, and needed interventions. A purposive sampling technique was used to select participants who have direct experience and involvement in the implementation of OKD programs such as: School-Based Feeding Program (SBFP), Water, Sanitation and Hygiene in Schools (WINS), National Drug Education Program (NDEP), Adolescent Reproductive Health (ARH), School Mental Health, and Medical and Nursing Services. Data were collected through structured interviews composed of both open-ended and guided questions, designed to elicit qualitative responses.

Data Analysis

After securing necessary permissions from the school division office, interview and probing questions were sent via online platforms. Respondents were given adequate time to provide thoughtful and reflective answers. Responses were collated and analyzed using thematic analysis, which involved familiarization with the data, coding of significant responses, identifying emerging patterns and themes, and grouping themes into categories aligned with the research objectives. Findings were then synthesized and discussed to highlight commonalities and differences across school contexts.

In conducting this research, the following ethical practices were observed. First, consent was obtained from all participants, respondents were assured of confidentiality and anonymity, and data collected were used solely for program improvement purposes.

RESULTS AND DISCUSSION

Results

The given findings underscore the themes that emerged from the qualitative analysis.

1. Issues, Challenges, and Limitations Encountered in Program Delivery

A major challenge identified in the implementation of OK sa DepEd (OKD) programs across schools is insufficient budget allocation. Respondents consistently reported that limited funding affects key aspects of program delivery, including the procurement of medical supplies, timely delivery of feeding programs, improvement of health-related infrastructure such as clinic spaces, and the ability to hire additional health personnel. Without adequate financial resources, schools struggle to maintain consistent and high-quality health services, which undermines the overall effectiveness of the initiatives.

Another significant barrier is limited human resources. Many schools lack sufficient qualified health professionals, including nurses, dentists, doctors, and guidance counselors. In several cases, classroom teachers are tasked with managing health initiatives despite their limited training, creating role conflict and reducing program efficiency. This is further compounded by a lack of specialized training, as most program implementers have not received formal instruction in health service delivery. Consequently, staff experience difficulties

in understanding program components, coordinating activities, and maintaining consistent service quality.

Inconsistent and uneven implementation of OKD programs was also observed. While some schools receive regular support and resources, others face challenges due to poor coordination, lack of materials, or minimal monitoring. Time constraints and activity overload further exacerbate these issues, as school heads and teachers struggle to balance administrative duties, academic responsibilities, and program tasks. Overlapping schedules and competing priorities often leave little time for proper planning or preparation, hindering smooth implementation.

Finally, low awareness and engagement among parents, community members, and even some school staff emerged as a concern. Many stakeholders have limited understanding of the objectives and components of OKD programs, and existing information, education, and communication (IEC) efforts are often insufficient or inconsistently applied. This gap in awareness reduces community support and participation, which are critical for the sustainability and success of school health and nutrition initiatives.Low Awareness and Engagement. There is a noticeable gap in awareness among parents, community members, and even school staff about the goals and components of OKD. IEC (Information, Education, and Communication) efforts are often insufficient or inconsistent.

2. Factors That Contribute to Successful Implementation

Several factors were identified as contributing to the successful implementation of OK sa DepEd (OKD) programs. A key enabler is strong stakeholder support, with active involvement from Local Government Units (LGUs), barangay health workers, and local health institutions significantly enhancing program reach and sustainability. Some schools further benefit from partnerships with non-governmental organizations, private donors, or local hospitals, which provide additional resources and technical assistance that strengthen program delivery.

Community and parental involvement also emerged as an important factor. Engagement of parents and guardians, particularly in feeding programs and mental health initiatives, was found to foster learner participation and compliance, creating a supportive environment that reinforces program objectives. Similarly, schools that receive clear policies and guidelines from DepEd Central or Regional Offices, communicated in a timely and detailed

manner, tend to implement programs more efficiently, as staff have a better understanding of roles, expectations, and procedures.

Learner participation in program planning or peer-led activities, such as health clubs and hygiene monitoring, further promotes ownership and strengthens the impact of interventions at the grassroots level. Finally, the effective dissemination of Information, Education, and Communication (IEC) materials, whether printed or digital, improves stakeholder awareness and understanding, contributing to higher success rates in program activities and overall program sustainability.3. Identifying Intervention Strategies to Enhance Program Delivery.

3. Intervention Strategies Needed to Enhance Program Delivery

A number of intervention strategies were identified as necessary to strengthen the implementation of OK sa DepEd (OKD) programs in schools. A key recommendation is capacity building for implementers, with participants emphasizing the importance of regular training, seminars, and workshops for teachers and program coordinators. These sessions should cover basic health services, mental health support, first aid, program management, and documentation, equipping staff with the knowledge and skills needed for effective program delivery.

Another critical strategy is the deployment of health professionals. The key informants suggested assigning at least one qualified health worker, such as a nurse, dentist, or guidance counselor, for every 1,000 learners. This would professionalize health service delivery and reduce the burden on teaching staff. Schools also highlighted the need for infrastructure and facility improvements, including dedicated clinic spaces, WASH (Water, Sanitation, and Hygiene) facilities, and secure storage for medical supplies. Regular monitoring and evaluation were also recommended through the establishment or strengthening of school-level health committees tasked with tracking program implementation, assessing outcomes, and reporting gaps and progress to division offices.

Given the growing concerns around student well-being, the research participants also advocated for the integration of mental health services, including routine counseling sessions, psychosocial support during crises, and mental health education for parents and teachers. Finally, adequate resource allocation was emphasized as a priority, with calls for increased school budgets, equitable distribution of supplies and equipment, and provision of digital tools

such as laptops, toolkits, and online training platforms to support program implementation.

Discussion

The findings of this study provide important insights into the implementation of OK sa DepEd (OKD) programs in Batangas City schools.

1. The Need for Adequate Resources and Staffing to Ensure Effective Program Delivery

The study indicates that insufficient budget allocation, limited staffing, and lack of specialized training significantly constrain the implementation of OKD programs. Without sufficient funding, schools face difficulties in procuring medical supplies, sustaining feeding programs, improving clinic spaces, and hiring health professionals, while untrained teachers are often tasked with managing health initiatives, leading to role conflict and reduced program quality. These results are consistent with existing literature highlighting that socio-economic and infrastructural constraints limit access to nutrition and health services in both urban and rural Philippine schools (Lange et al., 2017; Reyes et al., 2023). Moreover, the importance of proper allocation of resources and skilled personnel is emphasized by Uy et al. (2023), who note that adequate funding and human resource deployment are essential for sustaining health and nutrition initiatives and ensuring program continuity. Hence, deliberate investment in staffing, operational resources, and specialized training is critical to guarantee high-quality and consistent delivery of school health and nutrition interventions.

2. Stakeholder Engagement and Community Participation to Enhance Program Success

Strong stakeholder support and active engagement emerged as significant enablers of successful OKD implementation. Participation of Local Government Units (LGUs), barangay health workers, local health institutions, NGOs, parents, and learners contributes to program reach, ownership, and sustainability. These findings are aligned with prior research emphasizing that governance capacity, coordination, and community engagement are critical predictors of successful school-based health programs (Candelario, 2023; Co et al., 2018; Melo et al., 2024). Programs that foster partnerships among government agencies, NGOs, private sectors, and local communities benefit from shared resources, extended service reach, and greater community participation. Consequently, school heads

and program implementers should prioritize fostering strong stakeholder networks and facilitating parental and community engagement to reinforce program sustainability and maximize learner health and educational outcomes.

3. Capacity Building, Monitoring, and Mental Health Integration are Critical for Program Enhancement

The study further highlights the need for ongoing capacity building for program implementers, professional deployment of health personnel, structured monitoring, and integration of mental health services. Training, workshops, and seminars equip school staff with knowledge and skills necessary for effective delivery of health and nutrition programs. Similarly, systematic monitoring ensures fidelity to program guidelines and identifies gaps for continuous improvement. These findings corroborate prior research underscoring the importance of capacity building, monitoring, and context-specific interventions in improving program outcomes, particularly when cultural and community factors may influence program acceptance and uptake (Reyes et al., 2023; Melo et al., 2024; Co et al., 2018). Integration of mental health services aligns with emerging evidence that holistic approaches addressing both physical and psychosocial well-being are critical for enhancing learner participation, academic performance, and overall development.

CONCLUSION AND RECOMMENDATIONS

The main objective of this study was to assess the implementation of health and nutrition programs in schools of the Batangas City Schools Division, with particular focus on the issues, challenges, and limitations encountered by school heads, the factors that contribute to successful program implementation, and the intervention strategies needed to enhance program delivery. In view of exploring the aforesaid dimensions, the study sought to generate evidence-based insights that could guide policy, improve program practices, and strengthen learner health and well-being.

The findings of the study reveal that program delivery is constrained by multiple challenges, including insufficient budget allocation, limited human resources, lack of specialized training for implementers, inconsistent implementation across schools, and low awareness and engagement among parents and community members. At the same time, the study identified critical enablers of program success, such as strong stakeholder support, active

community and parental involvement, clear policies and guidelines, learner participation, and effective dissemination of Information, Education, and Communication (IEC) materials. To address existing gaps, participants emphasized the need for capacity building, deployment of qualified health professionals, infrastructure improvements, systematic monitoring and evaluation, integration of mental health services, and adequate resource allocation.

Based on these findings, it can be inferred that effective program delivery depends not only on the presence of health initiatives but also on adequate resources, well-prepared personnel, stakeholder collaboration, and systematic oversight. The study reinforces theoretical frameworks such as the Health Belief Model and Social Cognitive Theory, which posit that behavioral change and program success are influenced by both individual knowledge and supportive organizational and environmental conditions. Furthermore, the findings highlight that localized strategies, such as dedicated city ordinances, school-level health committees, and community partnerships, can enhance program relevance and sustainability. The insights suggest that school heads, as key implementers, play a pivotal role in mediating these factors to ensure that health and nutrition programs achieve desired outcomes in learner health, attendance, and academic performance.

Looking ahead, future studies could expand on this research by employing larger and more diverse samples, including both school heads and other stakeholders such as teachers, parents, and health workers, to capture a more comprehensive perspective of program implementation. Additionally, incorporating quantitative measures of learner outcomes, such as changes in nutritional status, academic performance, or absenteeism, could complement qualitative insights and strengthen evidence for program effectiveness. While this study was limited by its focus on school heads and self-reported data, replication with mixed-method designs and broader geographic coverage could address these limitations and provide deeper insights into optimizing the delivery of health and nutrition programs in schools.

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TASK-BASED INSTRUCTIONAL ACTIVITIES IN TEACHING LITERATURE FOR JUNIOR HIGH SCHOOL STUDENTS

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Abstract: This study aimed to develop task-based instructional activities to enhance the teaching of literature among junior high school students. It sought to examine current methods used in teaching various literary works and explore how these can be integrated into the development of students' macro skills—listening, reading, speaking, and writing. Using a qualitative research design, one-on-one interviews were conducted with nine English teachers, and data were analyzed through content analysis. Findings revealed that students' lack of motivation, limited language skills, and inadequate appreciation of literature hindered effective learning. Teachers recognized the need for more engaging, skill-integrated, and task-based activities to foster better literary understanding. The study concluded that task-based instructional activities can significantly improve students' macro skills and appreciation of literature. It is recommended that teachers utilize these activities to make literature lessons more interactive, relevant, and skill-oriented.

Keywords: content analysis, literature appreciation, macro skills, task-based instruction, teaching literature

INTRODUCTION

Literature has long served as a cornerstone of language education, promoting not only linguistic proficiency but also cultural and moral development. It enables learners to explore human experiences, emotions, and values while enhancing their intellectual and creative capacities. As Rezaei (2011) noted, literature fosters language development, cultural awareness, and critical thinking—essential components of holistic education. However, in many modern classrooms, students struggle to appreciate and understand literary texts due to

a lack of motivation, limited exposure, and underdeveloped macro skills such as listening, reading, speaking, and writing.

Globally and nationally, education systems continue to seek innovative strategies to make literature instruction more engaging and effective. The Philippines' K–12 curriculum emphasizes communicative competence and lifelong learning, calling for methods that connect classroom learning with real-life application. Task-based learning provides such an approach by encouraging students to use language meaningfully while completing purposeful tasks. This instructional strategy shifts the focus from rote memorization to performance and collaboration, helping learners actively construct meaning from literary texts.

Theoretically, this study is grounded in task-based learning (TBL), which highlights learning through doing. As Mao (2012) emphasized, tasks act as vehicles for language acquisition and deeper comprehension when learners engage in authentic and goal-oriented activities. By using task-based instructional activities, students not only practice language in context but also develop problem-solving skills and higher-order thinking abilities essential for understanding complex literary works.

Several studies have underscored the benefits of integrating literature and task-based instruction. Literature exposes learners to rich language structures, cultural themes, and authentic human experiences, while Task-Based Learning (TBL) provides meaningful opportunities for communication, collaboration, and purposeful language use. Combining these approaches has been shown to enhance students' engagement, comprehension, and appreciation of literary texts, thereby improving both their linguistic and literary competence.

However, despite these recognized advantages, the current context of literature teaching in the Schools Division of Batangas City reveals instructional gaps that need to be addressed. Many teachers continue to rely on traditional, teacher-centered approaches, which often limit students' active involvement in meaning-making. Students, on the other hand, frequently struggle with reading comprehension, critical analysis, and sustained engagement with literary texts—challenges consistently observed by English teachers in the division. These issues highlight the need for instructional innovations that can cater to diverse learners and promote purposeful, skill-integrated learning.

In response to these concerns, this study was conducted to develop task-based instructional activities specifically designed to enhance junior high school students' macro skills and appreciation of literature within the Batangas City

context. Specifically, it aims to explore existing teaching practices in the division, integrate task-based methods into literature instruction, and propose strategies that address learners' varied needs. By doing so, the study seeks to contribute to improving literature teaching in SDO Batangas City and to promote a more interactive, skill-based, and meaningful learning experience for junior high school students.

Literature Review

Teaching Literature

Wille (2014) reported a similar idea that literature comes from the Latin noun littera (letter) and referred originally, in the broadest sense, to the entire body of writing. Its name has traditionally been applied to the imaginative works of poetry and prose perceived by the intentions of their authors and the perceived aesthetic excellence of their delivery. There are various systems of literature, which include language, national origin, historical period, genre, and subject matter. Teaching literature to junior high school students enables them to learn more and develop their language skills. For Grade 7 Philippine Literature, the learners are expected to demonstrate understanding of: pre-colonial Philippine literature as a means of connecting to the past; various reading styles; ways of determining word meaning; the sounds of English and the prosodic features of speech; and correct subject-verb agreement. The learners should also demonstrate understanding of: Philippine literature during the Period of Apprenticeship as a means of examining conflicts; various purposeful listening and viewing strategies; the difference between literal and figurative language; ways to extract and condense information based on library sources; verbal and non-verbal cues in oral communication; and types of phrases, clauses, and sentences.

Language Skills

There are four language skills in teaching and learning English: listening, speaking, reading, and writing. Those skills are related to each other and cannot be independent; therefore, learners need to master all four skills. Mastering language skills will determine the students' communicative competence in the target language.

Raymundo (2023) examined the prevailing practices in the integrated assessment of macro skills—listening, speaking, reading, and writing—in English

as a Second Language (ESL) classes. By exploring how teachers evaluate these skills in a connected and holistic manner, the investigation provided a clearer picture of the effectiveness, limitations, and challenges present in current assessment approaches. The findings shed light on how well existing methods align with curriculum standards and how integrated assessment contributes to the development of learners' communicative competence.

Based on the insights gathered from the teachers' experiences and needs, a Language Training Program (LTP) and corresponding instructional materials were subsequently designed. The LTP aimed to strengthen teachers' skills in applying integrated assessment strategies, promote more accurate and consistent evaluation of macro skills, and enhance classroom instruction through meaningful, skill-based activities. The training program and materials were crafted to be practical, context-sensitive, and adaptable to everyday classroom situations, ensuring that they directly support teachers in improving the quality of ESL teaching and learning.

According to Sadiku (2015), teachers should set high standards for an English classroom. They should work to create the necessary conditions for students to learn effectively and reach the desired result. For the teaching of English to be successful, the four skills—reading, listening, speaking, and writing—should be incorporated in an effective way. These skills should be addressed in a way that helps students meet the standards set for them and develop their communicative competence gradually. This encompasses: listening and speaking are highly connected and work simultaneously in real-life situations. So, the integration of the two aims at fostering effective oral communication. This integration will assure real-life and purposeful communication.

Task-Based Instruction

As posited by Tahergholamreza (2014), in task-based instruction, the teacher's role is the "selector and sequencer of tasks": The teacher has an effective role in selecting, adjusting, and creating tasks and then shaping these tasks in keeping with learner needs, interests, and language skill levels. Before engaging in tasks, it is necessary to provide learners with pre-task training to adequately prepare them. This training may concern introducing the topic, helping students learn, or recalling valuable words and phrases to assist task completion, describing task instructions, and extending partial guidance on the task process.

According to Reyes (2024), the research intervention—the task-based approach—proved to be effective and produced a substantial positive impact on the learners' English language acquisition. The findings indicate that when learners are engaged in meaningful, purposeful tasks, they demonstrate improved comprehension, increased participation, and more accurate use of the language. The approach allowed students to use English in authentic and practical contexts, which enhanced their ability to process information, express their ideas, and interact collaboratively with their peers.

Furthermore, the task-based approach contributed to the development of multiple language skills, including listening, speaking, reading, and writing. Students showed noticeable improvement in their confidence and willingness to communicate, suggesting that the approach not only strengthened linguistic competence but also fostered a supportive and interactive learning environment. The results also highlighted the approach's capacity to address the diverse learning needs of pupils, making instruction more engaging, learner-centered, and effective.

Overall, the study affirms that task-based instruction is a valuable pedagogical strategy for enhancing English language acquisition among elementary learners, and it may be considered for broader implementation in English classrooms to support skill development and active learning.

Yalçin (2017) emphasized that connecting a literary piece to real-life situations develops the importance and applicability of literature to daily lives. Integrating discussions and activities that link literary pieces to real-life situations can transform literature into a significant tool for critical thinking, social awareness, and personal growth. It reveals that literature is not restricted to the scope of fiction but has a significant impact on everyday lives.

Task-Based Instructional Activities

As mentioned by Bowen (2016), task-based activity gives the learners an opportunity to do precisely what they do in real life. The primary focus of classroom activity is the task and language of the instrument that the students use to complete it. The task is an activity in which learners use language to achieve a specific outcome. The activity mirrors real life, and learners focus on meaning. Playing a game, solving a problem, or sharing information or experience can all be considered relevant and authentic tasks.

Performance tasks in teaching literature are essential for a well-rounded and effective educational experience. These tasks involve students actively engaging with literary works in various creative and analytical ways. Performance tasks require students to actively interact with the text, characters, and themes, fostering a deeper connection to the material. Students can apply their understanding of literary concepts, such as plot, characterization, and symbolism, in practical and creative ways. Performance tasks in teaching literature enrich the educational experience by promoting active engagement, critical thinking, creativity, communication, cultural understanding, and skill development. They allow students to connect with literature on a deeper level and prepare them for a range of future challenges and opportunities (Dinc, 2021).

Synthesis

The literature consistently highlights that integrating literature, macro skills, and task-based learning strengthens students' communicative competence and engagement. Wille (2014) emphasizes literature's linguistic and cultural value, which aligns with the Grade 7 curriculum's focus on developing comprehension, grammar, and communication skills. Studies by Sadiku (2015) and Raymundo (2023) show that effective instruction requires purposeful integration of listening, speaking, reading, and writing, though teachers often face challenges in applying holistic approaches. Task-based learning, supported by the works of Tahergholamreza (2014), Yalçin (2017), and Reyes (2024), addresses these gaps by engaging learners in authentic tasks that enhance participation, confidence, and language acquisition. Likewise, Bowen (2016) and Dinc (2021) affirm that task-based and performance activities deepen students' understanding of texts and promote critical thinking. Overall, the literature converges on the effectiveness of a task-based, skill-integrated approach in improving both language proficiency and appreciation of literature.

Research Questions

This study aimed to prepare task-based instructional activities for teaching literature to junior high school students. Specifically, this study aimed to answer the following questions:

1. What strategies are used in teaching the following literary works to students?

    1.1 Faith, Love, Time and Dr. Lazaro by Gregorio Brillantes

1.2 Wolf Totem by Jiang Rong

1.3 The Love Song of J. Alfred Prufrock by T.S. Eliot

1.4 Mother Courage and Her Children by Bertolt Brecht

2. How may literary works be integrated in the teaching of macro skills?

3. How do task-based instructional activities enhance the following skills of the students in:

3.1 listening;

3.2 speaking;

3.3 reading; and

3.4 writing?

4. What module on task-based instructional activities may be prepared?

METHODOLOGY

This part presents the research design, research instruments, and data analysis procedures employed in the study. It explains how the data were collected, processed, and analyzed to achieve the objectives of developing task-based instructional activities for teaching literature to junior high school students. The section also specifies the selection criteria for the nine participating teachers, including the grade levels they handled and their years of teaching experience. Furthermore, it identifies the types of schools represented in the study—whether urban or rural, large or small institutions, and whether they were integrated schools or standalone high schools—to ensure a diverse instructional context. To strengthen the credibility of the findings, the data analysis procedures include measures for ensuring consistency in thematic analysis, such as inter-coder reliability checks or validation strategies used during coding. Finally, the section states the researcher's positionality, outlining the stance and perspective that guided the interpretation of data and interaction with participants.

Research design

To attain the purpose of the study, the researcher used one-on-one interviews by applying content analysis to qualitative research. Briefly described by Maschi (2016), content analysis is a method for analyzing the content of a variety of data, such as visual and verbal data. Like other analytical methods in qualitative research, it requires that data be examined and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge.

Interviewing is a valuable method for exploring the construction and negotiation of meanings in a natural setting (Alshenqeeti, 2014). The present study dealt with identifying the task-based instructional activities that could be used in teaching literature to junior high school students. The type of literary pieces that teachers taught was also identified.

Research instruments

The primary instrument used in data gathering was a semi-structured interview questionnaire designed by the researcher. It aimed to determine the literary works taught per grade level and identify the task-based instructional activities implemented during literature instruction.

Construction

The interview guide was developed after reviewing related literature and similar studies to ensure the inclusion of relevant questions aligned with the study's objectives. The instrument was composed of four sections, each corresponding to specific research questions. A letter of consent and an explanation of the study's purpose were attached to ensure transparency and ethical compliance.

Validation

The instrument underwent expert validation. The first draft was reviewed by the research experts, who provided suggestions for refinement. The researcher incorporated these revisions to ensure the tool's clarity, validity, and reliability.

Administration

Before conducting interviews, the researcher obtained informed consent from all participants and assured them of confidentiality. Interviews were conducted either face-to-face or through digital means, depending on participants' availability. With their permission, responses were documented through audio recordings and note-taking. The researcher also clarified ambiguous responses to ensure accuracy and completeness of the data collected.

Data Analysis

After data collection, the researcher transcribed all interviews verbatim to capture participants' authentic responses and nuances in expression. Data were

then analyzed using thematic and content analysis. Thematic analysis was employed to identify recurring patterns, concepts, and categories that emerged from the data. These themes reflected teachers' perspectives on task-based instructional strategies, challenges, and their perceived impact on students' macro skills.

Content analysis was used to examine specific instructional strategies, activities, and materials discussed during interviews. This involved categorizing data into meaningful segments, interpreting their significance, and relating them to the objectives of the study. The results of the analysis were then synthesized to draw conclusions and recommendations regarding the development of task-based instructional activities in teaching literature.

Throughout the research process, ethical principles such as anonymity, confidentiality, informed consent, cultural sensitivity, and academic integrity were strictly observed. All interview data and recordings were stored securely and used solely for academic purposes.

RESULTS AND DISCUSSION

The research primarily discussed the literary works taught to students, integration of the macro skills to the teaching of literature, and the task-based instructional activities that may be utilized to enhance the four macro-skills such as listening, reading, speaking, and writing skills. This part exemplifies the presentation, analysis, and interpretation of the gathered data through lines and texts which are connected to the subject matter.

Teacher-Centered Approaches

Teacher-centered strategies such as vocabulary instruction, background introduction, pre-reading questions, and literary analysis appeared consistently across all texts. The major insight is that most teachers agree that introducing vocabulary and background knowledge is essential in preparing students for deeper literary engagement. Only a few teachers emphasized extensive lecture-based instruction, indicating a shift toward more interactive methods.

Student-Centered Approaches

Student-centered approaches, including collaborative learning, group discussions, dramatization, creative analysis, and reflective sharing, were dominant across most interviews. The major insight is that teachers heavily rely on collaborative learning and inquiry-based methods, suggesting a strong

preference for promoting active engagement and higher-order thinking skills. Very few teachers reported relying solely on traditional recitation methods.

Table 1

Summary Table. Instructional Approaches Across Literary Works

Literary Work	Teacher-Centered	Student-Centered	Material-Centered
Faith, Love, Time & Dr. Lazaro	Pre-reading questions, Vocabulary teaching, Author introduction	Collaborative learning, Recitation, Reflection	E-book thematic resources, Multimedia, Summary
Wolf Totem	Background introduction, Vocabulary instruction, Literary analysis	Oral recitation with critical questions, Creative analysis, Collaboration	Summary
The Love Song of J. Alfred Prufrock	Inquiry-based teaching, Author's background, Assessment	Critical analysis, Group discussion, Reading tasks	Multimedia introduction
Mother Courage and Her Children	Background information, Questioning, Vocabulary	Interactive reading, Collaborative tasks	Summary, Multimedia

Material-Centered Approaches

Material-centered strategies involved using e-books, summaries, audio recordings, videos, and multimedia tools. The major insight is that mo*st teachers utilize summaries and multimedia technology to enhance comprehension and engagement.* Only a few teachers noted challenges in accessing or preparing multimedia materials.

Faith, Love, Time, and Dr. Lazaro by Gregorio Brillantes

It is a short story written by Gregorio C. Brillantes that revolves around Dr. Lazaro, a middle-aged physician who reflects on his life and the difficulties of human relationships, particularly focusing on themes like faith, love, and the passage of time.

1. Literary Works Taught to Students

Table 2

Literary Works Taught to Students

Responses	Subordinate Themes	Categories
Construct pre-reading questions	Pre-reading Questions	Teacher-Centered
Present vocabulary words	Vocabulary Instruction	
Establish a meaningful context before introducing the text	Springboard Approach	
Introduce the author's background	Introduction of the Author	
Facilitate a cooperative learning environment	Collaborative Learning Strategies	Student-Centered
Allow assessment through answering the questions	Recitation	
Allow students to share their experiences, discoveries, and feedback	Reflection and Feedback	
Facilitate understanding of different themes in literature	Utilization of e-book with thematic focus	Material Centered
Search for music, videos, movies related to the literary text	Multimedia Integration	
Summarize the key points of the provided literary text	Use of Summary of the Literary Text	

Collaborative learning encourages students to work together, share ideas, and learn from each other, fostering a sense of ownership and responsibility for their learning. Recitation and reflection with feedback empower students to express their understanding, receive personalized guidance, and reflect on their learning journey, promoting autonomy and self-directed learning. the speaker highlights the importance of both collaborative learning and thematic-focused resources in improving their comprehension and analysis of literary themes. This supports the finding of the study of Laal (2011) in which it is stated that collaborative learning is an educational approach to teaching and learning that involves groups of learners working together to solve a problem, complete a task, or create a product. These are reflected in the following responses:

"…. Even before the pandemic, ah, also the collaborative learning strategies being utilized, and then ah… since yun nga we were using this particular e-book which is having this thematic focus that's why it's really a great help for me in the realization of the different ah themes in literature." – P1

Table 3

Wolf Totem by Jiang Rong

Responses	Subordinate Themes	Categories
Provide a brief overview of the general theme and the author's life	Background Introduction	Teacher-Centered
Define and explain important terms or concepts	Identification of Vocabulary	
Analyze literary elements	Literary Analysis	
Concerns the verbal delivery of information or material	Oral Recitation with Thought-Provoking Questions	Student-Centered
Involves incorporating imaginative and innovative approaches to understanding	Integration of Creative Elements in Analysis	
Collaborate by joining forces with their peers	Student Collaboration	
Help readers grasp the essence of a literary work	Use of Summary	Material-Centered

Wolf Totem by Jiang Rong

Wolf Totem is a novel by Jiang Rong, a Chinese author and environmentalist. Jiang Rong first published Wolf Totem in 2004, garnering significant attention both in China and internationally. The novel unfolds in Inner Mongolia amidst the Chinese Cultural Revolution, chronicling the journey of a youthful Beijing student who immerses himself in the Mongolian nomads' culture and forges a profound bond with wolves.

The strategies empower students to express their thoughts, ideas, and interpretations. It fosters a deeper understanding and engagement with the material. The use of a summary is categorized as material-centered because it focuses on a specific learning resource—the summary itself—to convey key information and concepts.

These are reflected in the following responses:

From the interview conducted, Participant 4 who had 5 years of teaching experience shared the following strategies in teaching literature.

> *"I'm going to introduce the background about it and then you perceive, and we go to more specific or major parts of the literature. There are important vocabularies or concepts that we will be using throughout different literary pieces. Then, we discussed the importance of each and proceed to the literary pieces."* – P4

It is important to have the author's background information to analyze the literary work better. Readers will be able to have a contextual understanding of the piece if the author's information is presented to them. This has similarity to the idea of Salem (2019), in which is mentioned that knowing about the life of the author will also help the students to know the intent of the author in writing a specific literary piece.

Table 4

The Love Song of J. Alfred Prufrock by T.S. Eliot

Responses	Subordinate Themes	Categories
Encourage students to ask thought-provoking questions	Inquiry-based Instruction	Teacher-Centered
Introduce the author's background	Author's Background	
Assess understanding and application	Assessment and Reflection	
Define and explain important terms or concept	Vocabulary Instruction	
Engage through critical analysis	Critical Analysis	Student-Centered
Facilitate sharing interpretation	Group Discussion	
Read the text out loud to understand the meaning	Reading Task	
Leverage technology for literature discussion	Multimedia Introduction	Material-Centered

The Love Song of J. Alfred Prufrock by T.S. Eliot

The Love Song of J. Alfred Prufrock by T.S. Eliot delves into the internal struggles and anxieties of its titular character, Prufrock. Through a stream-of-consciousness narrative, Prufrock reveals his deep-seated insecurities, fear of rejection, and alienation from society. The poem portrays Prufrock as a hesitant and introspective individual who is unable to take decisive action, particularly in matters of love and self-expression.

Students engage deeply with the material, share perspectives, and collectively construct meaning in critical analysis, group discussions, and reading tasks, which shifts the focus from teacher-led instruction to student-driven exploration and understanding. A multimedia introduction is categorized as material-centered because it focuses on the use of multimedia resources such as videos, presentations, or interactive tools to deliver content. In this approach, the emphasis is on the materials themselves rather than on student interaction or exploration, making it a material-centered aspect of instruction.

Teacher 6 who had 5 years of teaching experience and a teacher of Grades 8 and 9 students shared the strategies that have been working in her teaching.

> *"Actually making problems to teaching literature, inquiry-based instruction and visuality. It always worked because I always let my students challenge themselves in every thought-provoking questions. And that led them to think it about their observations of the world and release it to what's happening for what they have read from the literary piece, or vice versa. And also, of course, since we are already in the modern world, especially now in the new normal education, so basically, the use of technology is also a good strategy."*
>
> - P6

An inquiry-based approach to teaching literature is essential because it encourages students to explore and discover the characters, literary elements, and themes actively within a text that they are reading by asking questions, engaging in discussions, and conducting research about the topic. This method fosters critical thinking among students. This will also empower them to take ownership of their learning. This method also encourages curiosity, motivating students to pose questions and seek solutions to problems. This lends credence to the conclusions drawn in Chu (2017), in which it is said that inquiry-based instruction is an educational approach that places a strong emphasis on student engagement, critical thinking, and active learning. It involves students actively exploring real-world problems, posing questions, and conducting investigations to develop a deeper understanding of concepts.

Mother Courage and Her Children by Bertolt Brecht

The play Mother Courage and Her Children explores themes of war, survival, capitalism, and the effects of conflict on ordinary people. Mother Courage is a shrewd and pragmatic woman who navigates her way through the war by selling goods to soldiers on both sides.

Table 5

Mother Courage and Her Children by Bertolt Brecht

Responses	Subordinate Themes	Categories
Provide background information about the author and the literary text	Background Information	Teacher-Centered
Construct reading questions for literature class	Questioning	
Identify vocabulary words in the text	Vocabulary Instruction	
Engage with the text and share interpretations	Interactive Reading Activities	Student-Centered
Emphasize the active involvement of students in working together towards a common goal	Collaborative Tasks	
Offer a summary of the author's key life events or stories	Use of Summary	Material-Centered
Leverage technology for virtual literature discussions	Multimedia Integration	

These topics are classified as teacher-centered because they involve the teacher taking a leading role in providing background information, posing questions for discussion or assessment, and directly instructing students in vocabulary acquisition. The teacher guides the learning process, structures the content delivery, and determines the focus of instructional activities. Interactive reading activities and collaborative tasks are categorized as student-centered because they emphasize active participation, engagement, and collaboration among students.

In these activities, students take the lead in exploring texts, interacting with peers, and collectively constructing knowledge, fostering a learner-driven approach to learning. The use of summary and multimedia integration are considered material-centered because they focus on the incorporation and utilization of specific materials within the learning process. In these instances, the emphasis is on how materials such as summaries or multimedia resources are integrated into instruction rather than on student-driven activities or interactions.

Participant 8 was asked whether she had introduced this type of literature before.

> *"That is very important to give at least background about what you are teaching. I am asking questions related to the topic. As a teacher, we really have to give background information for them to really understand the topic to discuss."* – P8

This has similarity to Scott (2018), in which it is stated that questions pique the curiosity of the students, and this will allow them to think critically and creatively.

Cross-Analysis: Teacher Practices Across Literary Works

Most teachers emphasized building background knowledge and vocabulary before reading. Most teachers used student-centered activities such as collaboration, inquiry, and discussion. Only a few teachers relied on purely teacher-centered approaches throughout the lesson. Multimedia and summaries were widely used across all texts, indicating a preference for material-centered support.

2. Integration of Literary Works in the Teaching of Macro Skills

Table 6

Integration of Literary Works in the Teaching of Macro Skills

Literary Work	Theme	Listening	Speaking	Reading	Writing
Faith, Love, Time, & Dr. Lazaro by Gregorio Brillantes	Faith and Identity	Play the audio recording of the short story for the group without interruption. Ask listeners to focus on understanding the elements.	Participate in group discussions analyzing characters' faith and identity struggles.	Read excerpts for character development and themes.	Write reflective essays on faith and identity themes.

Wolf Totem by Jiang Rong	Nature and Society	Listen to interviews or podcasts discussing nature conservation and societal change themes in the novel.	Engage in debates or role-playing exploring tradition versus modernization conflicts.	Read passages describing the Mongolian landscape's significance to characters.	Write argumentative essays on the impact of environmental change on society and identity.
The Love Song by J. Alfred Prufrock by T.S. Eliot	Alienation and Modernity	Listen to audio recordings of the poem and analyze the use of imagery and symbolism to convey themes of alienation and disillusionment.	Discuss speaker's existential crisis through close reading.	Read critical essays on poem's analysis.	Write poetry analyses exploring the speaker's sense of isolation and fragmentation in modern society.
Mother Courage and Her Children by Bertolt Brecht	War and Survival	Listen to dramatic readings of key scenes and discuss the themes of war, survival, and capitalism.	Participate in group discussions exploring the ethical dilemmas faced by the characters during wartime.	Read scenes depicting the harsh realities of war and analyze the characters' motivations and actions.	Write character monologues or diary entries reflecting on the impact of war on individual lives.

Integration of Literary Works in the Teaching of Macro Skills

Macro skills are essential to communicating effectively with native speakers and other people. If students are able to master these skills, they will

be more competent in speaking, vocabulary, pronunciation, spelling, and grammar. The primary, key, and main skill that is set relative to a particular context is the macro skill.

Listening

Teachers commonly use audio recordings, interviews, podcasts, and guided note-taking. *Most teachers reported that listening to audio versions deepens comprehension and helps students identify character voices and tone.*

Speaking

Students engage in dialogues, role-playing, spontaneous speaking, debates, and oral presentations. *Only a few teachers expressed difficulty encouraging shy students, but overall speaking tasks were widely implemented.*

Reading

Techniques include read-alouds, dramatization, differentiated reading tasks, and chronological sequencing. *Most teachers emphasized read-aloud activities to improve pronunciation and comprehension.*

Writing

Activities include essays, reflective writing, vocabulary expansion tasks, acrostic poems, and creative writing (e.g., comics, continuing the story). *Most teachers integrate writing tasks as performance outputs linked to themes of the literary text.*

Active participation allows students to dissect intricate character dynamics and themes, honing their ability to express and defend interpretations. By considering diverse perspectives, students develop critical thinking skills, leading to a more profound understanding of the text.

> *"Read excerpts for character development and themes will sharpen our analytical abilities, helping us draw connections between characters and overarching themes while honing our reading comprehension skills."* – P1

Reading excerpts focusing on character development and themes enhances analytical skills by facilitating connections between characters and overarching themes. This practice also improves reading comprehension as students delve into the nuances of character motivations and thematic elements. Ultimately, the

process fosters a deeper understanding of the text through a focused examination of key literary elements.

This aligns with the finding of Dewi (2012), mentioning that reading excerpts focusing on character development and themes provides an opportunity to enhance analytical skills by examining connections between characters and overarching themes. This practice aids in developing a deeper understanding of the text while refining reading comprehension skills through the exploration of nuanced character motivations and thematic elements.

> *"We wrote reflective essays on themes of faith and identity, allowing us to not only delve into the text's deeper meanings but also refine our critical thinking and writing abilities. This integration will empower us to articulate our insights effectively while honing our analytical skills."* – P1

By crafting reflective essays on themes of faith and identity, we engaged deeply with the text, uncovering its deeper meanings. This process not only refined critical thinking and writing abilities but also empowered us to articulate insights effectively. Through this integration, analytical skills can be honed, fostering a more nuanced understanding of literary work. This lends credence to the conclusion of Dinc (2021), in which it is stated that performance tasks in teaching writing are essential for a well-rounded and effective educational experience.

Students can apply their understanding of literary concepts, such as plot, characterization, and symbolism, in practical and creative ways.

> *"We'll listen to interviews or podcasts that talk about how nature and society are changing in the novel. This will help us understand the book better and think more deeply about its themes. By doing this, we'll become better at analyzing books from different angles and expressing our thoughts clearly."* – P1

This supports the notion of Ariffin (2020), it is stated that listening to interviews or podcasts discussing the changes in nature and society depicted in the novel offers valuable insights for a deeper understanding of its themes.

> *"By immersing ourselves in these discussions, we'll not only deepen our understanding of the text but also enhance our critical thinking and communication abilities. This integration will empower us to analyze literature within broader societal contexts and articulate our perspectives effectively."* – P3

Engaging fully in discussions allows us to grasp the text's nuances while honing critical thinking and communication skills. This integration enables us to view literature through wider societal lenses, fostering the ability to express perspectives cogently. This lends credence to the notion of Raymundo (2023), ultimately, through active participation, the capacity to analyze literature comprehensively and articulate insights with clarity was developed.

> *"We wrote argumentative essays on the impact of environmental change on society and identity. By delving into this topic, we'll not only deepen students' understanding of the text but also enhance their critical thinking and writing abilities. This integration will enable them to analyze literature within broader societal contexts and effectively articulate their perspectives."* – P3

This supports the notion of Balas (2019), stated the idea that composing argumentative essays on the repercussions of environmental change broadens students' comprehension of the text while refining their critical thinking and writing skills.

3. Enhancement of the Macro-skills through Task-Based Instructional Activities

Table 7

Summary Table. Task-Based Activities Across Macro Skills

Macro Skill	Teacher-Centered Tasks	Student-Centered Tasks	Material-Centered Tasks
Listening	Vocabulary instruction, Author background	Peer interpretation, Discussion	Audio clips, Multimedia
Reading	Differentiated reading, Dramatization, Background info	Timeline creation, Character analysis, Experiential reading	Summaries, Guiding questions
Speaking	Questions, Oral explanations	Role-play, Dialogue creation, Spontaneous speaking	Radio drama, Multimedia
Writing	Questioning, Vocabulary instruction	Essays, Journals, Creative writing	Material evaluation

The findings revealed that teachers enhanced listening skills by using audio recordings, note-taking tasks, identifying speakers and key lines, and guided questioning. Most teachers agreed that listening to audio versions of the

texts improved students' comprehension of tone, character, and meaning. In terms of reading, teachers employed a variety of activities such as read-alouds, dramatization, timeline creation, character description, and comprehension tasks. A common insight shared by most teachers was that read-alouds were effective for checking both pronunciation and understanding. For speaking, teachers strengthened students' oral skills through role-playing, spontaneous speaking, dialogues, and dramatic interpretations. Although a few teachers noted that some students struggled with confidence, speaking activities remained widely implemented. Lastly, in the area of writing, teachers integrated tasks such as acrostic poems, essays, vocabulary expansion activities, journals, and creative story continuation. Most teachers viewed writing as a culminating activity that effectively assessed students' comprehension and personal insight into the literary texts.

Table 8

Listening

Responses	Subordinate Themes	Categories
Identify vocabulary words in the text	Vocabulary Instruction	Teacher-Centered
Introduce the author in the text	Author's Background	
Ask questions to students understand the lesson	Questioning	
Encourage them to share their interpretations, ask questions, and debate with their peers.	Literature Activities	Student-Centered
Analyze the text as a means of learning various skills	Literature as Springboard	Material-Centered
Use of audio clip in the discussion	Technology Integration	

Listening

A listening skill is the ability to effectively receive, interpret, and understand spoken or written information. It involves more than just hearing; it requires focus, attention, and comprehension. Good listening skills are essential for effective communication in both personal and professional settings. In the poem The Love Song of J. Alfred Prufrock, Teacher 6 shared the activities she used for the enhancement of the four macro skills. In listening, she mentioned:

"I actually let the students listen to the audio. I let them listen to the audio attentively and take the important notes and I will give

them guidelines on how they are going to give a report of all of what they have taken down." – P6

This reinforces the idea presented by Kirana (2016), it is said that incorporating audio-listening activities into literature instruction can provide a more immersive and comprehensive learning experience, enhancing students' engagement, comprehension, and connection with the literary text. It broadens the range of teaching methods and accommodates diverse learning styles and needs.

"For listening, listen to the audio attentively. And then I ask them to take down important notes based on what they have heard." – P7

"For the audio or to the videos which I presented them, they got to tell who told those lines and what is the role of that character. It allows them to have better understanding of what they are reading." – P9

Knowing which character is speaking helps readers or listeners understand the personalities, motivations, and perspectives of the characters in the story. It allows them to delve deeper into the character's development and understand their roles in the narrative. In literature listening activities, participants can work on their listening and analytical skills by correctly attributing lines to the characters. This can lead to a deeper appreciation and understanding of the text, which is essential for a well-rounded literary experience.

Reading

This supports the idea of Wiseman (2010), in which it is stated that read-aloud activities in literature. They are significant for various reasons, especially in educational settings. These activities involve someone reading a text or story aloud to an audience, often with an interactive or discussion component. Read-aloud activities in literature are valuable tools for promoting literacy, comprehension, a love for reading, and critical thinking. They have a positive impact on students of all ages, from early childhood to adulthood, and are an essential part of literature education and cultural enrichment.

"For reading, I think this is most common. I asked the students or each student three each part or each paragraph so that they will have participation as well to read each paragraph." – P7

In teaching Mother Courage and Her Children, the teachers shared the following strategies:

Participant 8 who had 3 years of teaching experience as Grade 10 teacher shared the following:

> *"I am trying my best okay to help my student be involved in teaching. So, those strategies are of course learner-centered approach."* – P8

Table 7

Reading

Responses	Subordinate Themes	Categories
Implement to accommodate diverse learning preferences	Differentiated Instruction	Teacher-Centered
Facilitate and guide the activity	Dramatization	
Give background information about the topic	Background Information	
Describe the characters in the literary piece	Description of Characters	Student-Centered
Develop a comprehension on the sequence of events	Chronological Timeline	
Experience the text firsthand	Experiential Learning	
Conduct analysis of the literary piece	Book Analysis	
Offer a summary of the author's key life events or stories	Use of Summary	Material-Centered
Develop thought-provoking questions related to the text	Essential Questions	

A learner-centered approach in reading literature is vital for fostering a more effective and enjoyable learning experience. This approach places the learner at the center of the educational process, considering their needs, interests, and abilities.

Speaking

Learners must develop their ability to speak confidently and fluently during their time at school in order to help them with their daily lives and prepare for the good future ahead of them. Speaking skills are defined as the skill that allows people to communicate effectively. This skill gives people the ability to

speak and convey information verbally in a way that the listener can understand. Speaking is an interactive process where individuals exchange information.

Table 8

Speaking

Categories	Subordinate Themes	Responses
Relates to the overall plot of theme of the piece	Questions about the Title	Teacher-Centered
Evaluate the characters in the literary piece	Character Evaluation	Student-Centered
Address and criticize societal issues, inequalities, or injustices	Revolutionary Act	
Explore the emotions evoked by the poem	Poem Reading	
Present the elements of drama in a traditional classroom setting using oral presentations or written reports	Presentation of Elements	
Focus on the storyline, characters, dialogue	Radio Drama	Material-Centered
Analyze the narrative structure, character arcs, and thematic elements	Multimedia Integration	

In teaching Mother Courage and Her Children, Participant 8 shared the following speaking activities:

> *"They have to come up with a dialogue, so, I can, for example, in Mother Courage, I can ask volunteers to portray the character of Mother Courage. So, they themselves, will be doing the speaking in front."* – P8

The supports the finding of Reznitskaya (2012), bolstered that engaging in dialogue as part of a literary piece-speaking activity offers several important benefits that contribute to a deeper understanding of the text and enrich the overall experience. Dialogue in a literary piece speaking activity is important because it facilitates character exploration, immersion in the narrative, character voices, language analysis, interpretation and inference, character development, theme exploration, discussion and debate, empathy and connection, enhanced comprehension, creativity and interpretation, real-world communication skills, active participation, multisensory learning, and enhanced appreciation for literature. Dialogue allows participants to connect more deeply with the

characters, themes, and nuances of the text, enriching their understanding and appreciation of the literary work.

> *"In spontaneous speaking they can also be confident, they will develop confidence in them when they do that kind of speaking task."*
> – P8

This confirms the concept proposed by Beheshti (2016), in which it is mentioned that spontaneous speaking in a literary piece speaking activity, where participants respond to the text without scripted or preplanned speeches, can offer several important benefits that enrich the experience and deepen the understanding of the literary work. In summary, spontaneous speaking in a literary piece is important because it encourages authentic reactions, critical thinking, active listening, real-time analysis, expression of diverse perspectives, building communication skills, promoting empathy and connection, enhancing memory and recall, encouraging debate and discussion, active participation, fostering thinking on one's feet, promoting adaptability, engaging emotionally, and encouraging inclusivity. This approach enriches the reading and discussion of the literary work, making it a more dynamic and interactive experience that allows participants to connect with the text on a deeper level.

Table 9

Writing

Categories	Subordinate Themes	Responses
Teacher-Centered	Questioning	Construct questions for literature class
	Vocabulary Instruction	Identify vocabulary words in the text
Student-Centered	Writing Tasks	Write essay, biography, and journal
	Continuing the Storyline	Give opportunities to brainstorm ideas, develop characters, and plot trajectories collaboratively
	Comic Strip	Participate in creative process, drawing or their own ideas, interests, and artistic abilities
Material-Centered	Evaluation of the Material	Assess various aspects such as content, format, accessibility, and appropriateness for the intended audience or context

Writing

Writing skills include all the knowledge and abilities related to expressing ideas through written work. There are many benefits to having good writing skills, one of which is being able to express thoughts and emotions. Writing skills are very important because they allow people to give a point without being physically present.

> *"Assessment of the learning of the students is through uh acrostic the poem as well. This will actually help the students to rebuild their learning about the topic that they studied, so I think this this kind of activity is a good a good way of enhancing the writing skills."* – P6

This corroborates with the finding of Hutabarat (2020), as it is stated those acrostic poems serve as a dynamic channel for creative expression, offering individuals a unique and artistic outlet to convey their thoughts, feelings, and ideas. This form of writing encourages a playful exploration of language, providing the freedom for personal and imaginative expression of emotions or experiences.

Crafting an acrostic poem goes beyond mere creativity; it sharpens language awareness by necessitating a meticulous consideration of language structure and word choice. Writers engage in a thoughtful selection of words that align with the theme or message of the poem, fostering an increased sensitivity to language nuances.

> *"I needed for vocabulary, so I get new words for the students to learn. And then I explain it to them and I asked them to use that vocabulary in a sentence. It's like supplying the word that first letter of the selected word. So it's not gonna cross state something like that. So that activity will help students reveal their learning about the topics that they study. So those are the activities you provided for the four macro skills."* – P7

Students learn new words, explain them, and then incorporate them into sentences. This approach involves a structured process, possibly utilizing the initial letters of selected words, to help with memory retention and understanding. Eventually, the speaker suggests that such activities facilitate students' comprehension and application of learned material across the four macro skills. This supports the idea of Kirby (2016) in which it is mentioned that

it was stated that teaching the meanings of words improves the understanding of texts that contain those words in nearly all instances.

Cross-Analysis of Macro Skills Integration

Listening and reading activities were the most consistently integrated skills across all teachers.

Speaking tasks varied the most depending on the teacher's confidence and class dynamics.

Writing tasks were universally used as assessment tools, though only a few teachers used creative writing outputs beyond essays.

Most teachers combined two or more macro skills within the same activity (e.g., listening + note-taking, reading + speaking through dramatization).

4. Module on Task-Based Instructional Activities in Teaching Literature for Junior High School Students

This proposed module is a comprehensive guide designed to empower educators with innovative strategies for creating an interactive and engaging literary learning experience. It begins with an overview and rationale, emphasizing the importance of incorporating task-based approaches into literature teaching. Recognizing literature as a vital tool for fostering language development, cultural awareness, and critical thinking, the module highlights how task-based instructional activities can immerse students in meaningful literary engagement. By integrating tasks that involve listening, speaking, reading, and writing, the module seeks to cultivate a dynamic learning environment that enhances language proficiency and deepens students' appreciation and understanding of literary texts.

The objectives of the module are multifaceted. Primarily, it aims to improve students' language proficiency by embedding macro skills within literature instruction. Through the use of task-based approaches, students are expected to develop a richer comprehension of literary works, enabling them to strengthen their analytical and critical thinking abilities. Additionally, the module aims to nurture students' appreciation for literature by offering interactive and purposeful tasks that connect textual concepts to real-life applications. Ultimately, the objectives focus on promoting a student-centered learning experience that not only advances language competence but also inspires lifelong interest in literature among junior high school learners.

The module also outlines a scope and sequence, detailing the progression of lessons and tasks aligned with the macro skills and the literary genres commonly taught in junior high school. This ensures that the activities are developmentally appropriate, logically sequenced, and aligned with curriculum standards. Each section builds upon the previous one, gradually increasing task complexity to support skill mastery and deeper literary engagement.

To support effective implementation, the module provides sample tasks for each macro skill. Listening tasks may include audio-based character analysis or identifying literary elements from recorded texts. Reading tasks involve guided reading, annotation exercises, and thematic exploration. Speaking tasks include role-playing, dramatic interpretations, and collaborative discussions, while writing tasks range from reflective journals to creative extensions such as story continuations. These sample tasks serve as practical models that teachers can adopt or modify to fit their instructional needs.

Finally, the module features assessment tools, such as rubrics and checklists, to help teachers evaluate students' performance in a clear and consistent manner. These tools are designed to measure both the process and the product of learning, ensuring that students are assessed holistically according to the specific demands of each task. The inclusion of these assessment instruments strengthens the module's usability by offering ready-to-apply tools that support fair, transparent, and outcomes-based evaluation.

Literary Works	**Listening Activity**	**Reading Activity**	**Speaking Activity**	**Writing Activity**
Faith, Love, Time, and Dr. Lazaro	Listen and Draw a Story	Jumbled Events	Talking about the Title	Writing a Letter
Wolf Totem	Back-to-Back Interview	What do you think will happen?	TED Talks	Book Analysis
The Love Song of J. Alfred Prufrock	Audiobook Report	Read Aloud	Spoken Word Poetry	Acrostic Poem
Mother Courage and Her Children	Listening Dialogues	Reader's Theater	Spontaneous Conversation	Response Journal

Overall, the Module on Task-Based Instructional Activities serves as a valuable resource that supports the professional growth of teachers and enriches the learning experiences of junior high school students. By offering structured guidance, practical tasks, and meaningful assessment tools, it empowers both educators and learners to engage with literature in a more dynamic, purposeful, and transformative way.

CONCLUSION AND RECOMMENDATIONS

The study concludes that task-based instructional activities significantly enhanced students' engagement, critical thinking, and comprehension of literary works, directly addressing existing gaps in Batangas City where literature instruction had often relied on traditional, teacher-centered approaches. By integrating diverse texts and designing interactive tasks such as vocabulary building, author background exploration, questioning, dramatization, multimedia use, and writing activities, teachers were able to provide richer and more meaningful learning experiences. These approaches not only strengthened students' macro skills—listening, speaking, reading, and writing—but also encouraged deeper appreciation and more active involvement in literature classes.

Furthermore, the development of a module on task-based instructional activities represents a concrete contribution to improving literature instruction in Batangas City, offering teachers a structured, research-based guide for implementing effective and engaging lessons. This module promotes student-centered learning and supports the development of higher-order thinking skills. Despite these contributions, the study recognizes its limitations, particularly the small sample size of nine teachers and the qualitative nature of the research, which may limit the broader applicability of its findings. Future research may expand the scope and utilize mixed methods to further validate and enrich the results.

Based on the findings and conclusions of the study, it is recommended that the prepared module be evaluated after the school year to determine its effectiveness in improving students' learning, while its continuous enhancement should be encouraged by administrators and embraced by educators to ensure high-quality instruction suited to students' needs and capabilities. Integrating training on task-based learning (TBL) into school Learning Action Cell (LAC) sessions is also recommended to strengthen teachers' competence in

implementing task-based instructional activities. Likewise, relevant trainings may be provided for module writers to develop appropriate speaking and literature activities, and the division may consider developing supplementary literature modules anchored on TBL to promote consistency and accessibility of materials across schools. Providing teachers with sample TBL lesson plans per quarter can further support effective lesson delivery, while conducting more extensive research, including classroom-based action research, is encouraged to refine and substantiate the effectiveness of the TBL module.

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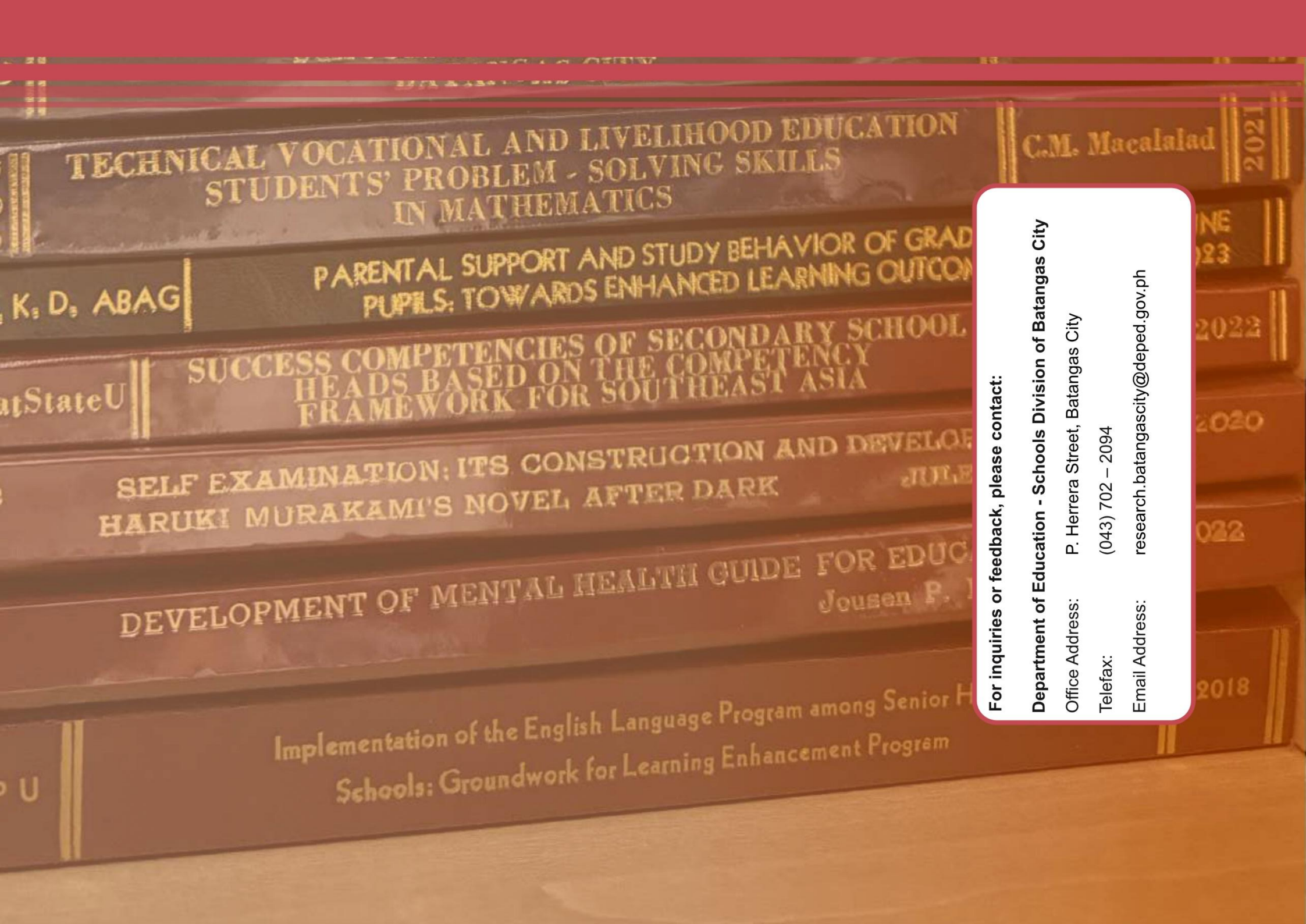

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