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FOREWORD

It is with great enthusiasm that I welcome you to this issue of ACADEMIC FRONTIERS. As a peer-reviewed, multidisciplinary journal, we aim to provide a dynamic platform for scholars, educators, and researchers to share their latest academic insights and discoveries. Our mission is to foster a global community of intellectuals who are dedicated to advancing knowledge and sparking meaningful conversations across various fields of study.

In the pages that follow, you will find a collection of peer-reviewed articles, research papers, and abstracts, each selected to reflect the most recent trends and developments in academia. These works represent the collective efforts of scholars and researchers from around the world, each offering unique perspectives that challenge, inspire, and provoke thought.

At ACADEMIC FRONTIERS, intellectual growth is a shared journey that transcends disciplines. Our commitment to publishing a wide range of topics—from innovative research methodologies and theoretical explorations to practical applications and interdisciplinary studies—reflects our dedication to supporting scholars at all stages of their academic endeavors.

As we navigate a rapidly evolving global landscape, the importance of research and knowledge-sharing has never been more profound. In this issue, you will find work that not only contributes to the advancement of knowledge but also highlights the crucial role that academia plays in shaping our world. These contributions serve as a reminder of the power of research to foster change, inspire progress, and create a better future for all.

I extend my deepest gratitude to our contributors, whose expertise and dedication have made this journal possible. I also express sincere thanks to our readers for their continued support and engagement. It is through your involvement that ACADEMIC FRONTIERS continues to grow into a vibrant and inclusive space for intellectual exchange and discovery.

As you immerse yourself in this issue, I invite you to reflect on the diverse range of ideas presented and consider how they might contribute to your own work and academic journey. Together, let us explore the frontiers of knowledge and celebrate the vital role of research in advancing human understanding.

Thank you for being a part of ACADEMIC FRONTIERS.

With warm regards,

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Status of Oral Communication Skills in English Classes at Lian Senior High School

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ABSTRACT

This study aimed to determine the oral communication skills in English classes at Lian Senior High School. It aimed to determine the status of oral communication skills of Grade 11 students of Lian Senior High School. Moreover, it also aimed to find the different communication strategies that Grade 11 Students use in the classroom to improve their oral skills. Lastly, it covered the strategies that teachers use to develop the oral communication skills of Grade 11 students. As the output of this study, the researcher came up with a supplemental lesson in oral communication that would be used to reinforce the lessons they have already learned. This proposed intervention was called OralCom Supplemental Material in Oral English. The descriptive method of research was used with the questionnaire as the instrument. Twenty-one (21) teachers of Lian Senior High School were the participants of this study. Results revealed that 49 students obtained a grade of 81- 85, among 166 students, which can be seen as room for improvement. In learning to communicate, the students used different strategies such as using humor to engage the audience, using multiple modes of communication, active listening, asking for clarification, asking open-ended questions to gain insights, and conveying important points. Focusing on what others say and acknowledging it, maintaining awareness of body language and non-verbal cues, speaking clearly and concisely, and being mindful of the tone were also used. These strategies have been used by the students in the 11th grade and should be strengthened by the teachers. These strategies were the starting point of learning. All these activities can be done together or separately, depending on the objectives of the lesson. It is therefore recommended that this proposed intervention, called OralCom Supplemental Material in Oral English, be used for these students. The different strategies may also be continually used.

Keywords: *Oral Communication Skills, Communication Strategies, English Language Proficiency, Supplemental Learning Material*

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Effectiveness of Collaborative Approach in Teaching Reproductive System Among Grade 10 Learners

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Abstract.
This study investigates the effectiveness of collaborative teaching methods in addressing the challenges of reproductive health education among adolescents in rural areas. The research employs a pre-test and post-test design, with 50 Grade 10 learners from Migara National High School serving as participants. A combination of peer discussions and group activities was implemented to overcome barriers such as discomfort, cultural taboos, and societal stigmas, which often hinder students' engagement and understanding of reproductive health topics. The pre-test and post-test assessments measured students' knowledge of reproductive health, with results showing an average improvement of 77% in test scores, indicating significant gains in student engagement, comprehension, and comfort. In-depth interviews were also conducted to gather qualitative insights into students' perceptions of the collaborative approach. The findings underscore the importance of culturally sensitive, peer-supported learning environments, contributing to the growing body of research advocating for the use of cooperative teaching strategies in sensitive subject areas, particularly in rural, resource-limited settings. However, limitations include the study's short duration and the lack of long-term follow-up to assess sustained impacts. Future research should explore the long-term effects of collaborative methods on students' retention of knowledge and behavioral outcomes related to reproductive health.

Keywords: Reproductive Health, Collaborative Teaching, Culturally Sensitive Methods, Adolescents, Peer Learning, Education Strategies

1.0 Introduction

In recent years, the integration of innovative teaching strategies has become a crucial approach to addressing the challenges faced by educators, particularly when dealing with sensitive topics such as reproductive health. Adolescents, especially in rural areas, often face numerous barriers that impede their understanding of reproductive health, including discomfort, misconceptions, and cultural taboos

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surrounding the subject. These barriers are compounded by societal norms, personal beliefs, and limited open communication about reproductive health in many communities (UNESCO, 2020). Traditional lecture-based instruction has been shown to fall short in engaging students effectively on such topics, often resulting in disengagement, misunderstanding, and a lack of retention of critical knowledge (Bolarinwa, 2021; Garde, 2021). Consequently, there is a pressing need for alternative teaching methods that not only engage students but also address the cultural sensitivities surrounding reproductive health education.

Collaborative teaching approaches, characterized by peer discussions, group activities, and cooperative learning, have emerged as promising solutions to these challenges. Such methods actively involve students in their learning process, encouraging them to engage in dialogue, share knowledge, and build critical thinking and communication skills. These strategies are particularly relevant for addressing complex and sensitive topics, such as reproductive health, where open dialogue and mutual respect are essential for effective learning. Previous studies have demonstrated the success of collaborative teaching methods in urban and well-resourced educational settings, where resources and teacher training are often more readily available (Magayes, 2022; Hernandez, 2020). However, a significant gap remains in the literature regarding the application of these strategies in rural, resource-limited contexts, where such educational interventions are often hindered by limited resources, inadequate teacher training, and cultural resistance to discussing reproductive health.

This study addresses this gap by exploring the effectiveness of collaborative teaching methods in rural schools, specifically in the context of reproductive health education. By focusing on Grade 10 learners at Migara National High School in Calbayog City, Samar, this research aims to assess the impact of peer discussions and group activities on students' engagement, comprehension, and comfort in discussing reproductive health topics. The primary objective of the study is to evaluate whether the use of collaborative strategies can mitigate the barriers posed by discomfort and cultural taboos, thereby enhancing students' understanding of reproductive health.

The significance of this research lies not only in its contribution to the academic understanding of collaborative teaching methods but also in its practical implications for improving reproductive health education in rural areas. By demonstrating the effectiveness of these approaches, the study provides evidence for the potential of peer-supported, culturally sensitive teaching strategies to make reproductive health education more accessible, engaging, and impactful for students in under-resourced settings. The findings could inform the development of curriculum and teaching strategies that can be implemented in similar rural contexts, addressing the unique challenges faced by educators in these areas.

Furthermore, this study is aligned with national educational goals, as outlined by the Department of Education (DepEd, 2019), which mandates the integration of reproductive health education into the K-12 curriculum. However, the effective implementation of this mandate is often hindered by cultural norms, teacher preparedness, and resource constraints. By providing empirical evidence on the effectiveness of collaborative learning in overcoming these barriers, this research contributes valuable insights that can guide policymakers, educators, and curriculum developers in enhancing the delivery of reproductive health education in rural schools.

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2..0 Methodology

This study aimed to evaluate the effectiveness of collaborative teaching strategies in improving Grade 10 learners' understanding of reproductive health topics. The research employed a qualitative research design, utilizing action research, which is particularly well-suited for addressing real-world educational challenges. This section outlines the research design, including participants, sampling technique, instruments, and data collection methods, providing a clear rationale for each decision made throughout the process.

2.1 Research Design

The study employed an action research design, chosen for its cyclical nature, which enables the iterative refinement of teaching strategies based on continuous feedback and observation. Action research is particularly valuable in educational settings because it enables educators to implement, test, and refine teaching interventions in real-time. This design also provides a framework for teachers to reflect on their practices, make immediate adjustments, and continually improve the learning environment. The iterative process of planning, action, observation, and reflection ensures that the teaching strategies are tailored to the specific needs of the students and the context in which the study takes place. This cyclical process fosters both immediate and long-term improvements in teaching effectiveness and student engagement.

Action research is also highly adaptable, allowing for the integration of both qualitative and quantitative data. By combining pre- and post-test assessments with qualitative insights gathered through interviews, this research approach captures a holistic view of the impact of collaborative teaching on student learning. It aligns with Vygotsky's Social Constructivist Theory, which emphasizes the importance of social interaction and collaboration in the construction of knowledge.

2.2 Sampling Technique

Purposive sampling was employed to select participants for the study, a technique that enables the researcher to choose participants based on specific characteristics relevant to the research questions. In this case, the participants were Grade 10 learners at Migara National High School, a rural school that faces the challenges of limited resources and cultural barriers in teaching reproductive health. Purposive sampling was selected because it ensures that the sample includes students who are directly involved in reproductive health education and are likely to benefit from the collaborative teaching strategies being tested.

The inclusion of students who were enrolled in the reproductive health course and willing to participate in peer discussions and group activities ensured that the study focused on the target population. This technique enhances the validity of the study by selecting participants who have firsthand experience with the topic and who can provide meaningful insights into the effectiveness of the intervention. Furthermore, purposive sampling enabled the inclusion of students from diverse academic backgrounds, ensuring that the study reflects the learning outcomes of a wide range of learners.

2.3 Participants

The study was conducted with 50 Grade 10 students (ages 15-18) from Migara National High School in Calbayog City, Samar. This group of learners was selected because they were enrolled in the

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reproductive health education course and had direct exposure to the collaborative teaching methods being evaluated. A diverse mix of male and female students participated, ensuring that the findings would be relevant to both genders. The students' prior academic performance in science, based on their previous grades, varied, providing a more comprehensive understanding of how collaborative methods affect learners with different levels of prior knowledge.

2.4 Research Instruments

The primary instruments used for data collection were pre-test and post-test assessments, designed to evaluate students' knowledge of reproductive health topics before and after the intervention. The pre-test and post-test were aligned with the collaborative activities, ensuring that the assessment reflected the topics covered during peer discussions and group tasks.

To ensure the validity of the tests, a content validation process was conducted, where three experienced science educators reviewed the pre-test and post-test. These educators were asked to assess the clarity, relevance, and alignment of the questions with the learning objectives. Their feedback was used to refine the questions and ensure that the assessment tool accurately measured the knowledge and understanding of reproductive health topics.

The pre- and post-tests were also piloted with a small group of students from a different section within the school before being administered to the full sample. This pilot testing enabled further refinement of the assessment tool, ensuring it was both reliable and valid for the target population. Reliability was assessed using Cronbach's alpha, to achieve a coefficient of at least 0.70 to ensure internal consistency of the test items.

Qualitative data were gathered through in-depth interviews with a subset of students (n = 10) following the intervention. These interviews focused on students' perceptions of the collaborative approach, their level of comfort in discussing reproductive health topics, and their engagement with the peer discussions and group activities. The interviews were semi-structured, allowing for flexibility in exploring students' personal experiences and providing a deeper understanding of how the collaborative approach influenced their learning and attitudes towards reproductive health.

2.5 Data Collection Procedure

The data collection process spanned four weeks, with the first week dedicated to administering the pre-test, which assessed the students' baseline knowledge of reproductive health. The subsequent three weeks focused on the intervention, which included peer discussions, group activities, and collaborative learning exercises designed to engage students and foster a deeper understanding of reproductive health topics. The activities were structured to create a supportive and interactive learning environment, where students could openly discuss and share ideas related to reproductive health.

After the intervention, the post-test was administered to assess changes in students' knowledge and understanding. In addition to the pre-test and post-test assessments, in-depth interviews were conducted with a subset of students to capture their qualitative experiences with the collaborative approach. The interviews provided insights into how the students perceived the effectiveness of peer discussions and group work in enhancing their comprehension of reproductive health, as well as any challenges they faced in engaging with the material.

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2.6 Data Analysis

The data analysis involved both quantitative and qualitative methods. For the quantitative data, the pre-test and post-test scores were analyzed using descriptive statistics (mean, standard deviation) to assess the overall improvement in students' knowledge. Inferential statistics were also applied, including paired t-tests and ANOVA, to determine whether significant differences existed in performance based on demographic factors such as age, gender, and previous science grades.

For the qualitative data, the interview transcripts were analyzed using thematic analysis, which involved identifying key themes and patterns in students' responses. This process allowed for the exploration of students' attitudes, perceptions, and experiences with the collaborative teaching approach. The qualitative data provided additional context to the quantitative findings, helping to explain why some students experienced greater learning gains than others and offering insights into the factors that contributed to their engagement and comfort.

2.7 Ethical Considerations

This study adhered to the ethical guidelines set by the Institutional Review Board (IRB) of Christ the King College of Calbayog City. Ethical approval was obtained prior to the commencement of the study, and informed consent was secured from all participants. For minors, parental consent was also obtained to ensure that the participants and their families were fully aware of the study's objectives, methods, and potential risks.

To maintain confidentiality and anonymity, all student data were coded, and personal identifiers were removed from the data sets. Participation was voluntary, and students were informed of their right to withdraw from the study at any time without penalty. To address the sensitive nature of reproductive health education, the researcher established clear guidelines for respectful communication during peer discussions and group activities. Students were encouraged to express any discomfort they felt, and support was provided if necessary.

3.0 Results and Discussion

The following section presents the findings of the study, which aimed to assess the effectiveness of collaborative teaching methods in enhancing Grade 10 students' understanding of reproductive health. Both quantitative data (pre-test and post-test scores) and qualitative data (interviews) were collected to evaluate students' engagement, comprehension, and comfort with the subject matter. The results demonstrate significant improvements in student knowledge and engagement, which are discussed in relation to the theoretical frameworks of Social Constructivism (Vygotsky, 1978) and Social Learning Theory (Bandura, 1977).

3.1 Overview of Results

The results from the pre-test and post-test assessments demonstrated a significant improvement in students' knowledge of reproductive health following the collaborative teaching intervention. Table 1 and Table 2 below illustrate the comparative performance of the students before and after the intervention, highlighting significant gains in their test scores.

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3.2 Pre-Test and Post-Test Performance

Table 1 *Pre-Test Performance in Reproductive System of Grade 10 Learners*

Raw Score	Frequency (f)	Percentage (%)
0-10	13	28.3
11-20	31	67.4
21-30	2	4.3
31-40	0	0.0
Minimum	5	
Maximum	24	
Mean	13.41	
SD	3.919	

The pre-test results indicate that the majority of students (67.4%) had limited prior knowledge of reproductive health, with scores predominantly falling within the 11-20 range. The mean score was 13.41, indicating that most students started the intervention with a moderate understanding of the subject. This baseline data highlights the need for a more engaging and comprehensive teaching approach to address the knowledge gaps.

Table 2 *Post-Test Performance in Reproductive System of Grade 10 Learners*

Raw Score	Frequency (f)	Percentage (%)
11-20	1	2.2
21-30	8	17.4
31-40	37	80.4
Minimum	19	
Maximum	40	
Mean	33.85	
SD	4.351	

The post-test results show a dramatic improvement in student performance, with 80.4% of students scoring between 31 and 40 points. The mean score increased to 33.85, demonstrating a significant gain in students' understanding of reproductive health. The standard deviation (4.351) reflects a more consistent performance across students, suggesting that the intervention effectively reached the majority of the class.

3.3 Statistical Analysis

To further understand the impact of the intervention, statistical analyses were performed on the pre-test and post-test scores. Paired t-tests and ANOVA were used to assess whether the differences in scores were statistically significant. The results showed a substantialincrease in student knowledge after the intervention, with a p-value < 0.05 indicating that the improvement was unlikely to have occurred by chance.

Post-hoc tests showed that students with higher prior science grades performed better in both the pre-test and post-test. This aligns with previous research indicating that prior academic performance can influence how well students engage with new content, particularly in complex subject areas like reproductive health (Leithold, 2020).

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Table 3 *Paired t-test Results for Pre-Test and Post-Test Scores*

Test	Mean Score (Pre-Test)	Mean Score (Post-Test)	Mean Difference	t-value	p-value
Pre-Test vs. Post-Test	13.41	33.85	20.44	14.22	<0.001

The paired t-test results (Table 3) show a significant difference in the mean scores between the pre-test (M = 13.41) and the post-test (M = 33.85), with a mean difference of 20.44. The t-value of 14.22, with a p-value < 0.001, indicates that the improvement in scores was highly significant, confirming the effectiveness of the collaborative teaching intervention in enhancing students' knowledge of reproductive health.

Table 4 *ANOVA Results for Pre-Test Performance Based on Demographic Variables*

Profile	F-value	p-value	Interpretation
Gender	0.549	0.586	No significant difference
Nutritional Status	1.530	0.133	No significant difference
Previous Science Grade	3.462	0.020	Significant difference

The ANOVA results (Table 4) show that previous science grades had a significant impact on pre-test performance, with a p-value of 0.020 indicating that students with higher previous science grades performed better on the pre-test. However, gender and nutritional status did not have a significant impact on students' pre-test scores, as indicated by the p-values of 0.586 and 0.133, respectively. This suggests that prior academic performance, rather than demographic factors, played a more significant role in students' baseline knowledge of reproductive health.

Table 5 *ANOVA Results for Post-Test Performance Based on Demographic Variables*

Profile	F-value	p-value	Interpretation
Age	0.321	0.727	No significant difference
Previous Science Grade	3.690	0.015	Significant difference

For the post-test performance, ANOVA results (Table 5) show that previous science grades had a statistically significant influence on post-test performance (p = 0.015). Students with higher prior science grades performed better in the post-test, suggesting that students with a stronger academic background in science may have benefited more from the collaborative teaching approach. However, age did not have a significant impact on post-test performance, as shown by the p-value of 0.727.

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Table 6 *Post-Hoc Test in Pre-Test Performance in Reproductive System of Grade 10 Learners When Grouped According to Previous Science Grade*

(I) Previous Science Grade	(J) Previous Science Grade	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval
75-79	80-84	-1.9526	1.3523	0.480	-5.570, 1.665
75-79	85-89	-3.2435	1.8202	0.039	-8.112, 1.626
75-79	90 and above	-4.1863	1.5924	0.046	-8.446, 0.073
80-84	75-79	1.9526	1.3523	0.480	-1.665, 5.570
80-84	85-89	-1.2909	1.9896	0.040	-6.613, 4.031
80-84	90 and above	-2.2338	1.7835	0.038	-7.005, 2.537
85-89	75-79	3.2435	1.8202	0.039	-1.626, 8.112
85-89	80-84	1.2909	1.9896	0.040	-4.031, 6.613
85-89	90 and above	-0.9429	2.1600	0.972	-6.721, 4.835
90 and above	75-79	4.1863	1.5924	0.046	-0.073, 8.446
90 and above	80-84	2.2338	1.7835	0.038	-2.537, 7.005
90 and above	85-89	0.9429	2.1600	0.972	-4.835, 6.721

The Post-Hoc test results (Table 6) show significant differences in pre-test scores between students with previous science grades of 75-79 and those with higher science grades (85-89 and 90 and above). Students with higher previous science grades (85-89 and 90 and above) outperformed those with lower previous grades (75-79), which highlights the importance of prior academic performance in understanding complex subjects like reproductive health. These results provide further evidence that students with a stronger science background benefit more from collaborative learning methods.

3.4 Qualitative Insights

In-depth interviews with a subset of students revealed that the collaborative teaching approach had a positive impact on their engagement and comfort with the subject matter. Students expressed that peer discussions helped them feel less embarrassed and more comfortable discussing reproductive health topics. This aligns with Vygotsky's Zone of Proximal Development (ZPD), where learning occurs most effectively when students are guided through tasks just beyond their current abilities, with support from peers and teachers (Vygotsky, 1978). Students also reported that group activities fostered a sense of community, allowing them to share knowledge, ask questions, and learn from one another's perspectives.

Furthermore, the use of peer-supported learning was identified as a key element in reducing the discomfort often associated with discussions of reproductive health. This reflects Bandura's Social Learning Theory, which posits that people learn through observing others, especially when they can relate to the model (Bandura, 1977). Students' positive feedback about peer interactions and the collaborative learning environment suggests that this approach facilitated both cognitive and emotional engagement, which is critical when teaching sensitive topics.

3.5 Theoretical Integration

The findings from both the quantitative and qualitative data strongly support Vygotsky's Social Constructivist Theory. According to Vygotsky, learning is a social process that occurs most effectively within the context of social interactions, particularly when guided by more knowledgeable peers or teachers. In this study, collaborative learning tasks such as peer discussions and group work served as mechanisms for constructing knowledge within the Zone of Proximal Development (ZPD). The

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significant improvement in student performance, along with the positive feedback from students regarding their increased engagement and comfort, suggests that collaborative teaching effectively supported their cognitive development by providing opportunities for social interaction and guided learning.

In addition, the findings also align with Bandura's Social Learning Theory, which emphasizes the role of observational learning and modeling in the learning process. Through the collaborative activities, students were able to observe and interact with their peers, who served as both models and sources of support. This interaction not only enhanced their understanding of reproductive health topics but also contributed to a more positive emotional response to the subject matter.

3.6 Broader Literature Integration

The results of this study contribute to the growing body of research on the use of collaborative teaching strategies in sensitive subject areas. Previous studies have highlighted the effectiveness of peer-supported learning in reducing anxiety and enhancing understanding in subjects like health education (Gade, 2019; Bolarinwa, 2021). This study extends these findings by demonstrating the success of collaborative strategies in a rural, under-resourced context, where such methods are often less commonly implemented.

Furthermore, the study's results support the argument that culturally sensitive and responsive teaching methods are crucial for addressing the unique challenges faced by students in rural areas. By creating a learning environment that encouraged openness and peer support, the intervention mitigated the discomfort and cultural taboos surrounding reproductive health, ultimately improving student engagement and comprehension.

3.7 Implications for Practice

The positive results from this study have important implications for teaching reproductive health in rural schools. Teachers can benefit from incorporating more collaborative teaching strategies, which not only enhance students' understanding of complex topics but also create a more inclusive and supportive classroom environment. Future curriculum development should emphasize the integration of peer discussions and group activities, particularly for sensitive subjects that require a high level of student comfort and engagement.

3.8 Limitations and Future Research

While the study provides valuable insights into the effectiveness of collaborative teaching in rural schools, several limitations should be noted. First, the study's short duration limits the ability to assess the long-term impact of the intervention on students' attitudes and behaviors related to reproductive health. Future studies should include follow-up assessments to evaluate the sustainability of the learning gains. Additionally, expanding the sample size and including schools from different rural regions would increase the generalizability of the findings. Future research could also explore how different teaching strategies, such as project-based learning or flipped classrooms, might further enhance students' understanding of reproductive health.

4.0 Conclusion

This study demonstrates that the collaborative teaching approach is highly effective in enhancing the understanding of Grade 10 students in reproductive health, particularly in rural, resource-limited settings. By integrating peer discussions and group activities, the intervention significantly improved students' knowledge, engagement, and comfort with a sensitive subject area. The results highlight the potential of collaborative teaching strategies to overcome cultural barriers, reduce discomfort, and foster a more inclusive and supportive learning environment. These findings contribute to the growing body of research advocating for the use of collaborative methods in educational contexts that deal with complex and culturally sensitive topics, such as reproductive health.

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The significant improvements observed in both quantitative test scores and qualitative student feedback suggest that the collaborative approach not only facilitates cognitive development but also enhances emotional and social engagement. This supports the theoretical frameworks of Vygotsky's Social Constructivism, which emphasizes the role of social interaction in knowledge construction, and Bandura's Social Learning Theory, which underscores the importance of learning through peer modeling and observation. The study thus reaffirms the value of socially interactive teaching methods in helping students navigate complex, culturally sensitive topics, particularly in environments where traditional lecture-based instruction often fails to engage or address students' emotional barriers.

4.1 Implications for Future Educational Practices in Rural Areas

The findings from this study have important implications for the future of reproductive health education in rural schools. Traditional methods of teaching reproductive health often fail to address the unique challenges faced by students in these contexts, including discomfort, cultural stigmas, and a lack of open communication about sexual health. This research highlights the importance of incorporating collaborative teaching strategies that create safe spaces for students to engage with sensitive topics, thereby fostering both cognitive and emotional learning.

Given the success of this intervention in a rural setting, the study suggests that collaborative teaching methods should be considered a key strategy for enhancing reproductive health education in rural schools across the nation. These methods have the potential to significantly enhance student engagement and learning outcomes, particularly in contexts where reproductive health education encounters substantial cultural and logistical challenges. As such, the adoption of collaborative strategies could play a crucial role in enhancing the overall quality of education in rural areas, where access to resources and teacher training may be limited.

4.2 Recommendations for Future Practice

1. Ongoing Professional Development for Teachers:

   To promote the successful integration of collaborative teaching strategies, it is crucial to provide educators with ongoing professional development. Teachers should receive regular training on the principles of collaborative learning, culturally responsive teaching, and strategies for facilitating peer discussions and group activities. This training should not only focus on the theoretical underpinnings of these methods but also on practical tools and resources that can be used to implement them effectively in the classroom. Professional development programs should be designed to meet the specific needs of teachers in rural areas, where challenges such as limited access to training resources and professional networks are prevalent.
2. Creating Collaborative Learning Environments:

   Schools should invest in creating classroom environments that support collaborative learning. This includes providing flexible seating arrangements that encourage group work, developing culturally sensitive materials that address the unique needs of students in rural settings, and integrating technology that facilitates collaborative activities, especially in areas with limited access to physical resources. Teachers should also be encouraged to foster an atmosphere of trust and respect, where students feel comfortable discussing sensitive topics, such as reproductive health, without fear of judgment or criticism.
3. Curriculum Development:

   Educational policymakers should consider incorporating collaborative teaching methods into the official curriculum for sensitive subjects, such as reproductive health. This would ensure that teachers are supported in using evidence-based practices to engage students in meaningful ways. Curriculum development should also include the creation of culturally sensitive instructional materials that reflect the diversity of rural communities and are aligned with students' lived experiences. The curriculum should be flexible enough to allow for

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student-centered, peer-led discussions that make reproductive health education more accessible and relatable to adolescents.

4. Long-Term Impact Assessment:

   Future research should focus on long-term studies to assess the sustained impact of collaborative teaching strategies on students' attitudes, knowledge retention, and behavioral outcomes related to reproductive health. It would be valuable to track students' progress over time to determine whether the gains observed in this study are maintained and whether students apply the knowledge gained in real-life situations. Longitudinal research could also explore the long-term effects on students' social and emotional development, particularly in terms of their ability to navigate cultural taboos and societal pressures surrounding reproductive health.

5. Expansion of Collaborative Methods to Other Subjects:

   While this study focuses on reproductive health, the positive outcomes observed suggest that collaborative teaching methods could also be beneficial in other subject areas. **Future research** should explore the applicability of these methods to subjects that require active student engagement, such as science, social studies, and ethics. Expanding collaborative strategies across disciplines could help create a more holistic educational approach that emphasizes the development of critical thinking, teamwork, and communication skills.

4.3 Recommendations for Further Research

Given the promising results of this study, further research is needed to investigate the long-term effects of collaborative teaching strategies on students' retention of knowledge and their behavioral outcomes in sensitive areas, such as reproductive health. Future studies should also investigate the challenges and opportunities associated with implementing collaborative learning methods in diverse rural contexts, particularly in regions with varying cultural norms and resources.

Qualitative research focusing on students' personal experiences with the intervention could provide deeper insights into how collaborative strategies influence their attitudes toward reproductive health education.

5.0 Contributions of the Author

Jurry T. Doinog (Lead Author): conceptualized the research, designed the methodology, and led the data collection and analysis. He was also responsible for interpreting the results, writing the main sections of the manuscript, and revising the study based on feedback. His contributions were fundamental in shaping the direction and outcomes of this study.

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7.0 Conflict of Interests

The author declares no conflict of interest related to the study.

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involvement in the collaborative learning activities, this study would not have been possible. Special acknowledgment is also given to the faculty members of Migara National High School, particularly those involved in the reproductive health education course, for their support in integrating the collaborative teaching methods into their curriculum. The Research Ethics Board is gratefully acknowledged for their guidance in ensuring that all ethical considerations were met during the course of the study. Finally, heartfelt thanks are extended to the author's family for their unwavering support and encouragement throughout this research process.

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The Influence of Instructional Materials on Academic Performance in Science Among Grade 6 Learners

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Abstract.
This study explores the influence of instructional materials on the academic performance of Grade 6 learners in science at Butuan Central Elementary School. Employing a quantitative research design, the study examines the relationship between the frequency of use of printed materials (e.g., textbooks, worksheets) and non-printed materials (e.g., multimedia, hands-on activities) and students' academic outcomes in science. The results reveal a statistically significant positive correlation between the use of printed materials and enhanced academic performance, while no significant relationship was found with non-printed materials. The findings suggest that printed materials, including visual aids and worksheets, substantially contribute to student engagement, comprehension, and retention, thereby improving overall performance in science. These results underscore the importance of strategically integrating printed instructional resources within science curricula. Further research is recommended to investigate the potential for combining both printed and non-printed materials to maximize learning outcomes.

Keywords: instructional materials, printed materials, non-printed materials, academic performance, science education

1.0 Introduction

Instructional materials are integral components of the teaching and learning process, serving as essential tools that facilitate the effective transmission of knowledge from instructors to students. These materials not only act as conduits for delivering content but also enhance student

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engagement, understanding, and retention of key concepts. As educators strive to create dynamic and interactive learning environments, the role of instructional materials, both printed and non-printed, becomes increasingly significant in fostering student success.

Printed materials, such as textbooks, worksheets, and handouts, have traditionally been the cornerstone of classroom instruction. They provide structured content that students can refer to for reinforcement, allowing for systematic knowledge transfer. Over time, however, non-print materials, including multimedia resources (such as videos, audio clips, and simulations), and hands-on activities have gained prominence. These materials engage multiple senses and offer more immersive learning experiences, which are believed to foster deeper learning and critical thinking. As educational technology continues to evolve, the integration of non-printed materials has become a focal point of modern pedagogical practices.

The efficacy of instructional materials in enhancing student academic performance has been the subject of extensive research. Studies have consistently shown that well-designed instructional resources improve comprehension and retention by addressing the diverse learning styles of students (Nolan, 2022). For instance, instructional materials that incorporate both visual and auditory elements have been found to enhance cognitive retention and engagement significantly (Ezeliora et al., 2023). However, despite the documented benefits of these materials, the impact of non-printed resources such as multimedia and interactive digital tools on student outcomes remains less explored, especially in primary education settings. Existing literature often focuses predominantly on the use of printed materials, neglecting the synergistic effects that may arise from combining both types of resources.

This study seeks to fill this gap by critically examining the relationship between printed and non-printed instructional materials and their influence on the academic performance of Grade 6 learners in science at Butuan Central Elementary School. The central aim is to explore how the frequency of use of these materials correlates with students' performance on standardized science assessments. Specifically, this research will investigate the effectiveness of printed materials, such as textbooks and worksheets, in conjunction with non-printed materials, including multimedia resources and hands-on activities. By examining these relationships, the study seeks to contribute to the broader discourse on the role of instructional materials in improving student learning outcomes.

In addition to contributing to academic knowledge, this study has important implications for educational policy and teaching methods. The findings inform educators and policymakers on how to integrate instructional materials more effectively into the classroom, potentially influencing curriculum design and professional development programs. The study advocates for a balanced and strategic approach to material usage, emphasizing that effective education requires not just the availability of resources, but also their thoughtful and context-specific implementation.

2.0 Methodology

This section outlines the research design, participants, instruments, and procedures employed to investigate the influence of instructional materials on the academic performance of Grade 6 learners in science. A detailed approach was adopted to ensure the collection of valid, reliable, and comprehensive data, which would facilitate an in-depth analysis of the relationship between instructional materials and student learning outcomes.

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2.1 Research Design

This study employed a causal-comparative research design, which is commonly used in educational research to examine cause-and-effect relationships when direct manipulation of the independent variable(s) is not feasible. The causal-comparative design enables researchers to explore how different variables, such as the use of instructional materials, are related to student outcomes without directly manipulating the variables, as in experimental designs.

The primary advantage of this design is its ability to examine relationships between naturally occurring variables in real-world educational settings. In this study, the researchers were unable to randomly assign participants to different instructional material groups, making a causal-comparative design an ideal approach for assessing the influence of printed and non-printed materials on students' academic performance. It enables a deeper understanding of pre-existing relationships and provides insights into how specific instructional practices may be correlated with academic achievement.

2.2 Research Locale

The research was conducted at Butuan Central Elementary School, located in Butuan City, Philippines, a public educational institution serving a diverse group of students. The school was selected for its notable implementation of both traditional printed instructional materials and emerging non-printed resources in science education. The school's proactive approach to integrating these varied instructional resources made it an ideal setting for the study. Butuan Central Elementary School is recognized for its extensive use of educational technologies, including multimedia tools such as PowerPoint presentations and interactive videos, alongside traditional printed materials. This diverse combination of instructional resources provided a rich context for exploring their potential effects on students' academic performance in science.

2.3 Research Participants

The participants of this study comprised 39 Grade 6 students enrolled in Section Gregoria De Jesus at Butuan Central Elementary School during the academic year 2024-2025. The sample was selected using purposive sampling, a non-probability sampling method that targets individuals who meet specific criteria relevant to the research. In this case, the selection was based on the students' enrollment in Grade 6 science classes, where both printed and non-printed instructional materials were regularly utilized.

The participants were carefully chosen to represent a range of academic achievement levels, ranging from high achievers to average and lower-performing students. This ensured that the sample reflected the diversity of educational outcomes, providing a comprehensive view of how different types of instructional materials affect learners at various academic levels. The inclusion of students from diverse performance backgrounds allowed for a more nuanced analysis of the relationship between material usage and academic outcomes. of instructional materials affect learners at various academic levels. The inclusion of students from diverse performance backgrounds allowed for a more nuanced analysis of the relationship between material usage and academic outcomes.

2.4 Research Instrument

The primary data collection tool was a survey questionnaire designed specifically for this study. The instrument was developed based on a thorough review of existing literature on instructional materials and their impact on student performance. The questionnaire was divided into two sections:

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one assessing the use of printed materials (e.g., textbooks, worksheets, handouts) and the other evaluating the use of non-printed materials (e.g., multimedia resources, interactive activities).

Each item was rated on a 5-point Likert scale, ranging from "Never" (1) to "Always" (5), allowing respondents to indicate how frequently they encountered each type of instructional material during their science lessons. This scale was selected for its ability to capture variations in the frequency of material use and its straightforward interpretation, which would facilitate the identification of correlations between material usage and academic performance.

The items were pre-tested with a small group of students to assess clarity and reliability, ensuring that the instrument accurately measured the intended constructs. The final version of the questionnaire contained 20 items, with 10 items dedicated to printed materials and 10 items for non-printed materials.

2.5 Data Gathering Procedure

The data gathering process was carried out with the prior approval of the school principal, ensuring adherence to institutional protocols and ethical standards. Upon receiving the necessary permissions, the research team distributed the survey questionnaires to the selected participants. Each participant was given approximately 30 minutes to complete the survey.

Before data collection, the students were informed about the purpose of the study, the voluntary nature of their participation, and their right to confidentiality. To further ensure the integrity of the data, the surveys were administered in a controlled environment, where students could complete the questionnaire without external distractions. The responses were then collected and organized for analysis.

In addition to the survey, the students' academic performance in science was assessed using their first-quarter grades, which were obtained from the school's official records. This provided an objective measure of educational performance that could be directly compared with the students' reported use of instructional materials. The integration of both self-reported data (regarding the usage of instructional materials) and objective academic data (grades) enabled a comprehensive analysis of the relationship between material usage and student performance.

2.6 Ethical Considerations

This study adhered to the highest ethical standards in educational research. The researchers ensured that all participants were fully informed about the nature of the study, and their participation was entirely voluntary. Informed consent was obtained from both the students and their parents or guardians, as required by the ethical guidelines for research involving minors.

The confidentiality of participants' identities and responses was strictly maintained throughout the research process, with all data anonymized and stored securely. Furthermore, the study ensured that no personal or sensitive information was disclosed in any reports or publications resulting from the research.

In addition, the study adhered to ethical guidelines for the use of data from the school's academic records, ensuring that only the necessary academic performance data were used and kept confidential. The study also aimed to minimize any potential risks to the participants, ensuring that their participation did not interfere with their regular academic activities or well-being. As part of this process, ethical approval for the study was obtained from the institutional review board (IRB) to ensure full compliance with ethical research practices.

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3.0 Results and Discussion

This section presents the findings of the study and discusses their implications in the context of existing research. The results are organized into clear categories, with each type of instructional material, printed and non-printed, being analyzed in detail. The statistical findings are followed by a comprehensive discussion of their significance, which includes potential explanations for the observed patterns and correlations. In addition, practical applications of the results are explored to inform future educational practices.

3.1 Printed Materials

The analysis of printed materials revealed a firm reliance on visual aids, such as charts and posters, in the classroom. These materials received the highest mean score of 4.72, indicating that they were applied "Every Time" in lessons. The frequent use of worksheets, handouts, and PowerPoint presentations (mean scores ranging from 3.79 to 4.05) also supported the importance of these materials in reinforcing scientific concepts.

Table 1 below provides a breakdown of the frequency with which various printed materials were used in the study, based on the students' responses.

Table 1. *Extent of Manifestation of the Influence of Instructional Materials in Terms of Printed Material*

Indicator	Mean	Remarks
1. The teacher includes visual aids (charts, cartolina) during lessons.	4.72	Applied Every Time
2. The teacher encourages me to engage with hands-on materials during lessons.	3.72	Applied Most of the Time
3. The PowerPoint presentation of the lesson enables me to retain the ideas and important points.	3.79	Applied Most of the Time
4. The teacher uses colorful posters that help illustrate important science concepts.	3.95	Applied Most of the Time
5. The teacher includes visual aids that help me understand scientific ideas.	4.05	Applied Most of the Time
6. The teacher often provides interesting experiments to enhance our learning.	4.00	Applied Most of the Time
7. The teacher provides visual demonstrations that make complex ideas easier to understand.	4.18	Applied Most of the Time
8. My comprehension of difficult science topics increases when I use hands-on materials.	3.05	Applied Frequently
9. The teacher provides modules on our use of instructional materials.	3.79	Applied Most of the Time
10. The teacher uses worksheets or handouts during science class activities.	3.95	Applied Most of the Time
Average Overweighted Mean	**3.92**	**Applied Most of the Time**

The high mean scores for visual aids, particularly charts and posters, suggest that these materials are perceived as highly effective in promoting student comprehension and engagement. While hands-on materials were used somewhat less frequently (M = 3.05), their potential to enhance understanding, particularly for complex scientific topics, was still recognized by the students.

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3.2 Non-Printed Materials

Non-printed materials, such as PowerPoint presentations, interactive digital resources, and multimedia tools, also had a noticeable presence in the classroom. PowerPoint presentations received a high mean score of 4.21, suggesting that they were frequently used and had a significant positive impact on student learning. Similarly, interactive digital resources, such as educational apps and simulations, scored even higher (M = 4.38), indicating their strong influence on student comprehension and engagement.

However, multimedia resources, such as videos, were used less frequently (M = 2.56), which may suggest limitations in their integration into the curriculum. This could be due to factors such as technological constraints, limited access to multimedia resources, or the preference for other instructional methods.

Table 2 below summarizes the use of non-printed materials and their perceived effectiveness.

Table 2. *Extent of Manifestation of the Influence of Instructional Materials in Terms of Non-Printed Material*

Indicator	Mean	Remarks
1. The teacher uses multimedia resources, like videos, to explain topics.	2.56	Applied Seldom
2. The teacher uses hands-on materials to make science lessons more engaging.	3.38	Applied Frequently
3. My comprehension in science increases when I have access to interactive digital resources.	4.38	Applied Every Time
4. The teacher incorporates real-life examples to make lessons more relatable.	3.38	Applied Most of the Time
5. I can understand the lesson through the PowerPoint presentation of the teacher.	4.21	Applied Every Time
6. The science teacher uses PowerPoint during the lesson.	4.15	Applied Most of the Time
7. The PowerPoint presentation enables me to grasp more knowledge through reading the topics shown.	4.64	Applied Every Time
8. The teacher frequently uses interactive whiteboards in class.	3.18	Applied Frequently
9. I prefer to study science when there are practical examples of real life.	4.08	Applied Most of the Time
10. The teacher uses educational apps or websites to learn science concepts in class.	3.85	Applied Most of the Time
Average Overweighted Mean	**3.78**	**Applied Most of the Time**

While interactive digital resources were found to be highly effective, the limited use of multimedia tools such as videos suggests an underutilization of these potentially powerful resources. Further exploration of the barriers to their use in the classroom is warranted.

3.3 Academic Performance

The academic performance of Grade 6 learners was assessed using their first-quarter grades in science. The results revealed a broad range of academic achievements, with the majority of students performing well. The average academic performance score was 89.05, indicating that most students scored between 80 and 94, with a concentration in the high 80s to low 90s.

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Table 3. *Academic Performance of the Grade 6 Learners*

Grade	Frequency	Percentage (%)
82	2	5.1
83	1	2.6
85	2	5.1
86	3	7.7
87	3	7.7
88	6	15.4
89	3	7.7
90	5	12.8
91	5	12.8
92	3	7.7
93	3	7.7
94	3	7.7
Total	**39**	**100%**
Average	**89.05**	

These results indicate that **instructional materials**, both printed and non-print, have a positive influence on students' academic outcomes. The alignment between the frequency of material use and students' high academic performance underscores the value of consistently integrating instructional materials into science education.

3.4 Statistical Analysis

Spearman's rank correlation analysis was conducted to examine the relationship between the extent of the manifestation of instructional materials and academic performance. The results revealed a significant negative correlation between printed materials and academic performance ($r = -0.360$, $p = 0.024$). While this suggests that, as the frequency of printed material use increased, academic performance slightly decreased, several factors could explain this counterintuitive finding. One possibility is that an overreliance on printed materials might lead to passive learning, where students engage less actively with the content. Additionally, the quality and variety of printed materials may vary, which could affect their effectiveness. For example, if the printed materials do not sufficiently challenge students or foster critical thinking, this could impact their performance.

Conversely, non-printed materials did not show a statistically significant relationship with academic performance ($r = -0.288$, $p = 0.075$), indicating that the use of multimedia tools and interactive resources did not significantly influence academic performance in this study.

Further regression analysis revealed that neither printed nor non-printed materials significantly predicted academic performance. Specifically, the regression coefficients for printed materials were -0.130 ($p = 0.924$), and for non-printed materials, -2.338 ($p = 0.103$). This suggests that other factors, such as teaching methods, student motivation, or classroom dynamics, may play a more significant role in shaping academic outcomes than the type of instructional materials used.

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Table 4. *Statistical Analysis of the Relationship Between Instructional Materials and Academic Performance*

Variable	Spearman's r	p-value	Remarks
Printed Materials	-0.360	0.024	Statistically significant
Non-Printed Materials	-0.288	0.075	Not statistically significant
Regression Analysis (Printed Materials)	-0.130	0.924	Not significant
Regression Analysis (Non-Printed Materials)	-2.338	0.103	Not significant

The statistical findings suggest a complex relationship between instructional materials and academic performance. While printed materials show a significant but negative correlation with student performance, non-printed materials did not significantly affect academic outcomes. This highlights the need for further research into how these materials are integrated into teaching and their impact on different learning environments.

4.0 Conclusion

This study aimed to investigate the influence of instructional materials, both printed and non-printed, on the academic performance of Grade 6 learners in science. The research findings provide significant insights into the role that different types of instructional resources play in shaping student learning outcomes. Specifically, the study demonstrated that printed materials, such as textbooks, worksheets, and visual aids, had a statistically significant positive impact on students' academic performance. The frequent use of these materials in the classroom was associated with enhanced comprehension, engagement, and retention of key scientific concepts.

In contrast, the study found that non-printed materials, such as multimedia resources and interactive digital tools, did not have a statistically significant relationship with academic performance in this context. While non-printed materials were perceived as beneficial and were frequently used in the classroom, their effectiveness in improving academic outcomes was less clear. This finding highlights that, while these materials have the potential to engage students and foster deeper learning, their integration into the curriculum may need to be optimized for maximum effectiveness.

The findings suggest that a balanced and strategic approach to the use of instructional materials is necessary for enhancing student learning outcomes. While printed materials should remain a cornerstone of the curriculum, educators are encouraged to incorporate non-printed materials such as multimedia and interactive resources where appropriate. A well-integrated combination of both types of materials has the potential to cater to diverse learning styles, foster greater student engagement, and support deeper learning.

4.1 Recommendations for Future Research

1. Synergy Between Printed and Non-Printed Materials: Future research should explore the synergistic effects of combining printed and non-printed materials in the classroom. While this study focused on the isolated impact of each type, investigating how these materials work together could yield valuable insights into creating a more holistic and engaging learning environment. Studies could examine the combined use of textbooks, worksheets, multimedia, and hands-on activities to understand their collective impact on student performance.
2. Longitudinal Studies: Future studies could also employ longitudinal designs to track how the use of instructional materials affects academic performance over extended periods. This would provide more comprehensive data on whether the impact of instructional materials persists over time and how their use influences students' long-term academic development.

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3. Different Educational Contexts: Expanding the study to include a broader range of schools with different resources, teaching styles, and student demographics would help generalize the findings. This would provide more diverse insights into how instructional materials affect learning in various educational settings.

4.2 Recommendations for Educators and Policymakers

1. Optimizing the Integration of Printed and Non-Printed Materials: Educators are encouraged to optimize the integration of both printed and non-printed materials in their teaching strategies. While printed materials remain essential for delivering structured content, non-printed materials, such as multimedia and interactive tools, should be strategically used to enhance student engagement and facilitate deeper learning. For instance, using videos and simulations to complement textbook content can help students visualize complex concepts and reinforce learning through multiple sensory experiences.
2. Professional Development for Teachers: Teachers should receive professional development training on how to combine various types of instructional materials effectively. Workshops and training sessions could focus on how to effectively use multimedia tools in conjunction with traditional printed materials to create dynamic and interactive lessons. Educators should be encouraged to experiment with these materials to find the most effective combinations for their classroom contexts.
3. Policy Recommendations: Policymakers should consider promoting the balanced use of both printed and non-printed instructional materials in the development of curricula and educational policies. Ensuring equitable access to both traditional and digital resources can enhance the learning experience for all students, regardless of their technological access. Schools should be provided with the resources to integrate both types of materials, especially in underserved areas where technological infrastructure may be limited.
4. Assessment of Material Effectiveness: Schools and educational institutions should regularly assess the effectiveness of the instructional materials used in their classrooms. Feedback from teachers and students can help determine which materials are most effective for promoting understanding and academic achievement. This assessment process also guides decisions about which materials should be prioritized in future curriculum revisions.

5.0 Contributions of the Author

Janna Mae Claire D. Amora contributed to data collection, data analysis, and the writing of the research, focusing on presenting the results and synthesizing the findings in relation to the existing literature.

Judy Mae B. Asuncion was responsible for the research design and methodology, and contributed to the writing, particularly in developing the study's framework, introduction, and methodology sections.

Meverly F. Cosmiano led the statistical analysis, ensuring the appropriate methods were applied, and contributed to the editing and writing, focusing on the results and discussion sections.

Isidro M. Biol, Jr. and Shadrach Malana, as advisers, provided guidance and mentorship and reviewed the manuscript to ensure its academic rigor and ethical integrity.

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7.0 Conflict of Interests

The authors declare no conflict of interest.

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Community Engagement and Social Skills of College Students: A Correlational Analysis

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Abstract.

This study investigated the relationship between community engagement and the social skills of college students at Ifugao State University. Employing a quantitative descriptive–correlational design, the researchers surveyed 292 undergraduate respondents across five colleges using a structured questionnaire. Data were analyzed with SPSS v29 through descriptive statistics, Pearson correlation, and multiple regression. Results revealed a statistically significant positive correlation ($r = .542$, $p < .001$) between participation in community engagement and social skills development, encompassing communication, empathy, teamwork, and leadership. Students demonstrated high levels of teamwork and empathy, while communication and leadership skills were moderate. Areas of interest such as education, health care, and environmental initiatives drew the highest participation, whereas politics was the least prioritized. Regression analysis further identified areas of interest as the sole significant predictor of students' community engagement ($p < .001$). These findings confirm the critical role of experiential and social learning in developing interpersonal competencies, suggesting that community engagement enhances both personal growth and social responsibility. While limited by its focus on a single campus and reliance on self-reported data, the study provides valuable insights for higher education institutions seeking to strengthen community-based programs. It is recommended that universities expand partnerships with local organizations, integrate service learning more robustly, and incorporate structured training to improve communication and leadership skills. Future studies may extend the scope to multiple institutions and utilize longitudinal or qualitative approaches to capture the sustained impact of engagement.

Keywords: community engagement, communication, empathy, leadership, social skills, teamwork

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1.0 Introduction

Community engagement has become an essential pedagogical and developmental strategy in higher education, fostering mutual collaboration between academic institutions and communities (Nursey-Bray, 2020; Ohmer et al., 2019). At its core, community engagement is not only a form of social responsibility but also an educational process that shapes students' cognitive, affective, and behavioral competencies. In the Philippines, the Commission on Higher Education (CHED) has institutionalized this through Republic Act 9163, otherwise known as the *National Service Training Program (NSTP) Act of 2001*, and further operationalized it through the 2017 *CHED Framework for Community Engagement in Higher Education*. These policy instruments underscore that universities are not merely centers of knowledge production but also key agents of community transformation.

Empirical evidence worldwide consistently demonstrates that community engagement enhances students' academic achievement, civic responsibility, and professional preparedness. Studies have shown improvements in leadership, teamwork, and communication skills as well as strengthened empathy and ethical awareness among engaged students (Astin et al., 2018; Chung & Coates, 2019; Schiff et al., 2023). Importantly, empathy has been identified as a mediator of positive social interactions and conflict resolution (Decety & Cowell, 2019; Kosslyn & McMurray, 2021), while teamwork fosters inclusivity and collective problem-solving (Johnson & Johnson, 2019; Salas et al., 2019).

However, despite extensive global literature, there remains limited empirical research that contextualizes these dynamics within Philippine higher education, particularly in non-metropolitan and provincial universities such as Ifugao State University. Much of the existing scholarship focuses on large, urban-based institutions, leaving rural contexts underexplored. Furthermore, previous studies often describe the benefits of engagement without examining the demographic or motivational factors that predict variations in participation and skill development. This gap is critical because universities in less urbanized regions operate within unique socio-cultural and economic landscapes, where engagement not only develops students' interpersonal competencies but also directly addresses community needs such as health, education, and local governance.

Theoretically, this study is anchored on Kolb's Experiential Learning Theory (1984) and Bandura's Social Learning Theory (1977). Kolb posits that learning occurs through a cyclical process of concrete experience, reflective observation, abstract conceptualization, and active experimentation—making community engagement a prime avenue for skill development. Bandura, meanwhile, highlights the importance of observational learning, modelling, and social reinforcement, suggesting that students refine their social skills by interacting with peers, mentors, and community leaders in real-world contexts. Taken together, these frameworks provide a robust lens for examining how participation in community activities influences interpersonal competencies.

The relevance of this study extends to the global development agenda as well. Community engagement in higher education directly advances Sustainable Development Goal (SDG) 4 (*Quality Education*) by promoting inclusive, equitable, and skills-based learning, and SDG 17 (*Partnerships for the Goals*) by fostering collaborations between universities and communities. Embedding such practices within academic programs ensures that graduates are not only knowledgeable but also socially responsive and professionally competent, aligning education with both local development and global sustainability imperatives.

Against this backdrop, this study aims to empirically investigate the relationship between community engagement and the social skills of students at Ifugao State University, specifically focusing

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on communication, empathy, teamwork, and leadership. Specifically, it aims to determine how demographic factors, reasons for involvement, and areas of interest influence engagement and to identify predictors of social skill development. By addressing this gap, the study contributes to the body of knowledge on engagement in Philippine provincial contexts, informs CHED's policy directions, and provides actionable insights for curriculum designers and educators tasked with shaping the next generation of Filipino professionals and leaders.

2.0 Methodology

This section outlines the research design, locale, participants, instruments, procedures, ethical safeguards, and analytical strategies employed in the study. A systematic and transparent description of the methodology ensures replicability, enhances the credibility of findings, and situates the research within established standards of empirical inquiry in the social sciences.

2.1 Research Design

This study employed a quantitative, descriptive-correlational design to examine the relationship between community engagement and the social skills of undergraduate students. The correlational approach was chosen because it allows for a systematic investigation of associations between variables without manipulation, thereby providing empirical evidence of naturally occurring patterns (McCombes, 2019). This design is particularly appropriate given the study's aim to establish whether students who are more engaged in community activities exhibit stronger social skills. While correlational research does not permit causal inference, it provides a critical foundation for identifying significant linkages that can inform more robust longitudinal and experimental designs in future research.

2.2 Research Locale and Participants

The study was conducted at Ifugao State University – Lamut Campus, a provincial higher education institution in the Cordillera Administrative Region of the Philippines. The campus serves students across diverse socioeconomic backgrounds, making it an ideal setting for exploring engagement in a non-metropolitan context.

A total of 292 undergraduate students were selected using purposive sampling. Inclusion criteria required participants to have prior or ongoing involvement in community engagement activities, ensuring the relevance of their experiences to the study's objectives. Students were drawn proportionally from five colleges: Arts and Sciences, Education, Agriculture and Sustainable Development, Computing Sciences, and Criminal Justice Education. The sample included students from first to fourth year, capturing perspectives across different academic stages.

Purposive sampling was justified because the research specifically targeted individuals with meaningful engagement experiences. While this approach limits the generalizability of findings to the broader student population, it enhances internal validity by ensuring that responses are directly relevant to the variables under study. Future research may further enhance the representativeness of this study by using random or stratified sampling.

2.3 Research Instrument

Data were collected using a self-constructed and expert-validated questionnaire consisting of four sections:

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1. Demographic profile (age, sex, year level, college, and areas of interest).
2. Reasons for involvement in community engagement (10 items rated on a four-point Likert scale from *Never* to *Always*).
3. Areas of interest for engagement (10 items across domains such as education, health, environment, politics, and technology).
4. Social skills scale (40 items, divided equally across communication, empathy, teamwork, and leadership).

Instrument validation involved review by three faculty experts in social work and educational psychology. Reliability testing was conducted with a pilot group of 30 students, yielding a Cronbach's alpha of 0.87, indicating high internal consistency. Each subscale exceeded the recommended reliability threshold (communication = 0.81, empathy = 0.85, teamwork = 0.83, leadership = 0.82), ensuring robust measurement.

2.4 Data Gathering Procedure

Prior to data collection, approval was secured from the Ifugao State University administration and relevant college deans. The questionnaire was administered in classroom settings, with clear instructions provided by the researchers. Informed consent was obtained from all participants, emphasizing voluntariness, confidentiality, and the right to withdraw at any time without penalty. Completed questionnaires were collected, checked for completeness, and encoded into Microsoft Excel. Data were then imported into SPSS v29 for statistical analysis. To ensure accuracy, double-entry verification was performed.

2.5 Ethical Considerations

The study adhered to the ethical principles of beneficence, respect for persons, and justice. Participant anonymity was maintained by excluding identifying information, and responses were coded numerically. All data were stored in a password-protected digital folder accessible only to the researchers. Results were reported in aggregate form to avoid inadvertent identification of individuals.

2.6 Data Analysis

Data analysis involved both descriptive and inferential statistics.

Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to profile respondents and summarize levels of community engagement and social skills.

Pearson product-moment correlation was employed to test the strength and significance of associations between engagement dimensions (reasons and areas of interest) and social skills. Effect sizes were interpreted using Cohen's (1988) conventions: small ($r = .10$), medium ($r = .30$), and large ($r = .50$).

Multiple regression analysis was applied to identify significant predictors of social skills, using demographic and engagement-related variables as independent factors. Assumptions of regression (linearity, normality, multicollinearity, homoscedasticity) were tested prior to interpretation.

This analytic strategy ensured a comprehensive understanding of both the descriptive patterns of student engagement and the predictive relationships between variables, thereby strengthening the validity of findings and their implications for educational policy and practice.

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3.0 Results and Discussion

This section presents the study's findings, organized thematically into demographic profiles, areas, and reasons for involvement in community engagement, social skill development, and statistical tests of correlation and regression. Each set of results is accompanied by a critical discussion that situates the findings within relevant theoretical frameworks, particularly Kolb's Experiential Learning Theory, Bandura's Social Learning Theory, and Self-Determination Theory, and compares them with national statistics and international literature. The aim is not only to describe patterns but also to interpret their broader implications for educational policy, curriculum design, and institutional practice in Philippine higher education.

3.1 Profile of Respondents

Understanding the demographic characteristics of respondents provides context for interpreting patterns of community engagement and social skill development. Age, sex, year level, and college affiliation are critical factors that may influence students' opportunities, motivations, and readiness for engagement.

Table 1. *Frequency and percentage distribution of respondents in terms of age*

Age	Frequency	Percentage (%)
18–20	159	54.5
21–23	125	42.8
24–26	7	2.4
27–29	1	0.3
Total	**292**	**100.0**

Most respondents (97.3%) were between 18 and 23 years old, reflecting the typical age range of undergraduate students in the Philippines (CHED, 2022). This concentration suggests that the findings primarily reflect early adulthood, a developmental stage characterized by identity exploration and the development of interpersonal skills (Arini, 2021). The limited representation of older students (2.7%) may limit the generalizability of the results to more mature learners.

Table 2. *Frequency and percentage distribution of respondents in terms of sex*

Sex	Frequency	Percentage (%)
Male	142	48.6
Female	150	51.4
Total	**292**	**100.0**

The nearly equal gender distribution (51.4% female, 48.6% male) provides balance for interpreting engagement patterns. Prior studies (Clifford et al., 2020; Agurto et al., 2020) found that female students often display greater civic participation and social responsiveness, which could subtly influence engagement outcomes.

Table 3. *Frequency and percentage distribution of respondents in terms of year level*

Year Level	Frequency	Percentage (%)
1st Year	36	12.3
2nd Year	187	64.0
3rd Year	55	18.8
4th Year	14	4.8
Total	**292**	**100.0**

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The predominance of second-year students (64%) suggests that results reflect transitional undergraduate experiences. This phase is often associated with academic adjustment and exploration of extracurricular opportunities (Cameron & Rideout, 2020). The underrepresentation of fourth-year students (4.8%) limits insights into how engagement influences more mature students nearing graduation.

Table 4. *Frequency and percentage distribution of respondents in terms of college*

College	Frequency	Percentage (%)
COE	41	14.0
CCJE	75	25.7
CCS	56	19.2
CAS	84	28.8
CASD	36	12.3
Total	**292**	**100.0**

Students came from diverse colleges, with the most significant shares from CAS (28.8%) and CCJE (25.7%). Disciplinary contexts may shape engagement preferences: CAS students may focus on literacy and arts, while CCJE students may emphasize law enforcement and safety. This suggests the need for discipline-sensitive program design that aligns community projects with academic specializations.

3.2 Areas of Interest in Community Engagement

Students' preferred areas of engagement reveal not only their personal motivations but also the types of social issues they are most willing to address. Identifying these interests can guide universities in designing extension programs that align with both institutional mandates and community needs.

Table 5. *Areas of interests for involvement in community engagement*

Area of Interest	Never (%)	Sometimes (%)	Often (%)	Always (%)
Politics	11.3	42.1	37.7	8.9
Environment	0.3	7.5	52.4	39.7
Advocacy	1.0	28.8	53.4	16.8
Education	0.0	4.5	32.9	62.7
Health Care	0.0	12.7	47.3	40.1
Sports	3.8	29.8	35.6	30.8
Arts	7.9	35.3	36.6	20.2
Safety/Security	0.7	11.0	38.7	49.7
Travel/Exploration	1.7	21.6	40.1	36.6
Technology	1.0	16.8	43.2	39.0

Education (62.7% *always*) and health care (40.1% *always*) were the most preferred areas, consistent with CHED's priority extension programs. Environmental engagement also scored high (92.1% *often/always* combined), reflecting growing climate concerns. Conversely, political engagement was least prioritized, consistent with global literature on youth political apathy (FEU PPC, 2022). Universities should therefore capitalize on high-interest domains to strengthen community partnerships, while also creating safe avenues for civic engagement to foster democratic participation.

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3.3 Reasons for Involvement

Examining the reasons students engage in community programs provides insight into the balance between intrinsic motivations (e.g., altruism) and extrinsic motivations (e.g., career advancement). This informs how institutions better structure programs to sustain authentic participation.

Table 6. *Reasons for involvement in community engagement*

Indicator	Mean	SD	Descriptive Equivalence
Gain practical experiences	3.41	0.68	Always
Gain better understanding of chosen field	3.38	0.62	Always
Build self-esteem and confidence	3.29	0.73	Always
To build valuable connections	3.19	0.67	Sometimes
To help meet community needs	3.18	0.74	Sometimes
Make a positive difference	3.13	0.68	Sometimes
Improve CV/resume	3.06	0.71	Sometimes
Teach and share skills	3.05	0.74	Sometimes
Peer influence	2.99	0.72	Sometimes
Requirement purposes	2.90	0.81	Sometimes
Overall	**3.16**	**0.42**	Sometimes

Career-oriented motivations (practical experience, disciplinary knowledge, confidence-building) emerged strongest, reflecting the pragmatic orientation of Gen Z students. Altruistic drivers (helping communities, making a difference) were moderate. Interpreted through Self-Determination Theory (Deci & Ryan, 1985), this suggests a blend of intrinsic and extrinsic motivations. Universities should design programs that integrate both—linking career development with authentic service—to sustain long-term engagement.

3.4 Social Skills Development

One of the study's central aims was to assess how community engagement contributes to the development of social skills, particularly communication, empathy, teamwork, and leadership. These competencies are critical for employability and civic responsibility.

Table 7. *Level of social skills in terms of communication*

Item (sample)	Mean	SD	Descriptive
Ask for clarification when needed	3.27	0.72	Always
Express ideas clearly	2.97	0.59	Sometimes
Speak in front of a group	2.64	0.72	Sometimes
Overall	**2.91**	**0.44**	Sometimes

Communication was moderate, with weaknesses in public speaking and conflict resolution. Given that Philippine employers consistently rank communication as one of the top 21st-century skills, this gap undermines employability (Davis, 2021). Universities should incorporate structured communication training into their engagement programs.

Table 8. *Level of social skills in terms of empathy*

Item (sample)	Mean	SD	Descriptive
Consider how actions impact others	3.26	0.64	Always
Recognize when someone feels left out	3.25	0.70	Always
Show concern for difficulties	3.24	0.67	Always
Overall	**3.08**	**0.46**	Sometimes

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Empathy was relatively strong, consistent with Decety & Cowell (2019), who note that community contexts enhance perspective-taking. However, weaknesses in conflict resolution suggest a need for structured reflection activities to strengthen empathetic responses under challenging situations.

Table 9. *Level of social skills in terms of teamwork*

Item (sample)	Mean	SD	Descriptive
Value contributions of team members	3.59	0.58	Always
Respect different perspectives	3.45	0.62	Always
Open to feedback	3.43	0.65	Always
Overall	**3.28**	**0.42**	Always

Teamwork scored highest, validating Johnson & Johnson's (2019) assertion that cooperative learning fosters inclusivity and mutual respect. High teamwork competencies reflect the effectiveness of group-based community programs in fostering collective responsibility.

Table 10. *Level of social skills in terms of leadership*

Item (sample)	Mean	SD	Descriptive
Encourage/support team members	3.29	0.64	Always
Take responsibility for team outcomes	3.21	0.68	Sometimes
Provide constructive feedback	3.13	0.70	Sometimes
Overall	**3.03**	**0.50**	Sometimes

Leadership skills were moderate, with strengths in encouragement but weaknesses in accountability and decision-making. This mirrors ASEAN-wide studies that identify leadership as a persistent youth skills gap. Universities should offer leadership workshops integrated into service-learning projects to bridge this gap.

3.5 Relationship between Community Engagement and Social Skills

To test the study's hypotheses, correlations were computed between community engagement and social skills, followed by regression analysis to determine predictive factors.

Table 11. *Correlation between dimensions of community engagement and social skills*

Variable	R-value	Sig.	N
Reasons for involvement	0.509	0.000	292
Areas of interest	0.488	0.000	292

Both reasons for involvement and areas of interest correlated strongly with social skills, with R-values above 0.50, representing a significant effect (Cohen, 1988). This empirically validates Kolb's Experiential Learning Theory, which posits that active participation enhances interpersonal competence.

Table 12. *Predictors of community engagement (Multiple regression)*

Variable	B	SE	β	t	Sig.
Age	-0.031	0.042	-0.045	-0.736	0.462
Sex	0.015	0.039	0.020	0.394	0.694
Year level	0.062	0.035	0.110	1.746	0.082
Program	-0.013	0.017	-0.043	-0.799	0.425
Areas of interest	0.441	0.044	0.505	9.945	0.000*

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Among all predictors, only areas of interest significantly influenced engagement. Demographic factors (age, sex, year level, program) were not significant, challenging common assumptions that such characteristics determine participation. This underscores the motivational role of aligning programs with students' passions, consistent with Self-Determination Theory's emphasis on interest-driven behavior.

4.0 Conclusion

This study provides compelling empirical evidence that community engagement is a significant driver of social skill development among college students at Ifugao State University. The findings demonstrated a strong positive correlation ($r = .542$, $p < .001$) between engagement and competencies in communication, empathy, teamwork, and leadership, with areas of interest emerging as the sole significant predictor of participation. These results affirm Kolb's Experiential Learning Theory, which emphasizes the transformative power of real-life experiences, and Bandura's Social Learning Theory, which highlights learning through observation and social interaction.

The results also reveal nuanced patterns: teamwork and empathy were consistently strong, reflecting students' capacity for collaboration and perspective-taking, while communication and leadership were only moderate, underscoring gaps in employability and accountability. These patterns mirror broader ASEAN-wide concerns regarding youth leadership and communication competencies, suggesting that such gaps are systemic rather than isolated.

From a policy perspective, the study highlights the need for universities, particularly those in provincial contexts, to move community engagement from the periphery to the center of higher education practice. Engagement programs should not be treated as extracurricular add-ons but as structured, credit-bearing components of the curriculum that actively contribute to both academic achievement and social responsibility. Importantly, these findings align with CHED's service-learning mandates and support the global call of SDG 4 (Quality Education) to promote inclusive, skills-based learning, as well as SDG 17 (Partnerships for the Goals), which underscores the importance of collaboration between higher education institutions and local communities.

While the study is limited to a single campus and relied on self-reported measures, its implications are far-reaching. It confirms that student interest and motivation, not demographics, drive sustained engagement and skill growth, challenging the assumption that age, sex, or program are primary determinants of involvement.

4.1 Recommendations

In light of these findings, the following recommendations are proposed for policy, practice, and future research:

1. Integrate structured service-learning into curricula.
    - Universities should embed community engagement as a formal requirement across all undergraduate programs, ensuring that students acquire social competencies alongside academic knowledge.
    - Credit-bearing service-learning courses can balance academic rigor with civic responsibility.
2. Expand partnerships with local organizations and LGUs.
    - Collaboration with local government units, NGOs, and community organizations should be deepened to diversify student engagement opportunities in high-interest areas (education, health, environment).
    - Such partnerships directly operationalize SDG 17, ensuring that universities serve as catalysts for local development.
3. Strengthen communication and leadership training within engagement.
    - Engagement activities should be designed not only for participation but also for skill-building. Structured modules on public speaking, conflict resolution, accountability,

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and decision-making should be incorporated into community projects to enhance their effectiveness and impact.
- Mentorship programs pairing students with faculty or community leaders can provide role modelling and feedback aligned with Bandura's Social Learning Theory.

4. Adopt interest-driven engagement models.
   - Since areas of interest were the only significant predictor of engagement, programs should be tailored to students' passions and disciplinary strengths. For example, technology students may contribute through digital literacy programs, while agriculture students may support sustainable farming initiatives.
5. Institutionalize monitoring and evaluation systems.
   - Universities should establish robust mechanisms (e.g., pre- and post-engagement assessments, stakeholder feedback, reflective journals) to systematically measure the impact of engagement on student skills and community outcomes.
   - Data generated can inform continuous improvement and demonstrate compliance with CHED's quality assurance frameworks.
6. Future research directions**.**
   - To strengthen generalizability, future studies should employ cross-institutional and cross-regional designs, comparing outcomes across rural and metropolitan universities.
   - Longitudinal studies are recommended to trace how engagement influences students' professional trajectories after graduation.
   - Mixed-methods approaches should be employed to capture both statistical trends and rich qualitative insights into students' lived experiences of engagement.

4.2 Final Synthesis

This study demonstrates that community engagement is not merely a supplementary activity but a strategic pathway for cultivating socially responsible, employable, and globally competent graduates. By aligning community engagement initiatives with institutional mandates and global development frameworks, Philippine higher education institutions can ensure that their graduates are not only prepared for the labor market but also equipped to address the pressing social challenges of their communities.

5.0 Contributions of the Author

Geanne Beah Pawing Manuel (Lead Author): Conceptualization, instrument design, data collection, statistical analysis, writing of the initial draft, and corresponding author responsibilities.

Precious Hope Obanan Basilan (Co-Author): Data gathering, organization of literature review, assistance in analysis, and editing of manuscript drafts.

Reiza Grace Nabad-ao Tumitit (Co-Author): Statistical validation, results interpretation, preparation of tables and figures, and proofreading of the manuscript.

Rizzabel Lawaguey Bulibol (Co-Author): Encoding of survey responses, data tabulation, assistance in discussion and conclusion writing, and manuscript revisions.

Glenn Paulo K. Labasan (Co-Author/Research Adviser): Overall supervision of the research process, critical review of methodology and results, intellectual guidance, and final approval of the manuscript for submission.

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Leisure Activities and Their Contribution to Health: Exploring the Landscape for Young Learners

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Abstract.
This descriptive research study examines the impact of various leisure activities on the overall health of young learners, with a particular focus on their physical, mental, and social well-being. In an era where structured academics and digital media use increasingly shape children's daily routines, it is crucial to understand how leisure time supports holistic child development. The study specifically aimed to identify the types of leisure activities most commonly engaged in by children aged 6 to 12 and to describe the perceived benefits of these activities on their well-being. A sample of 100 elementary students from a public school in Cavite was selected through random sampling to ensure balanced representation across age, gender, and grade levels. Data were collected using a researcher-designed questionnaire, validated by experts in education and child development. Descriptive statistics, including frequencies, percentages, and weighted means, were employed to analyze the data. Results showed that outdoor play, creative arts, digital gaming, and sports were the most prevalent leisure activities, with students reporting that these pursuits enhanced their happiness, energy, focus, and social connectedness. Notably, barriers such as limited recreational spaces, excessive screen time, and heavy academic workloads were also identified. While children's self-reported perceptions provide valuable insights, these may reflect subjective biases, which future studies should address through

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triangulation with observational or physiological data. This study contributes new evidence from the Philippine context, highlighting that leisure is not a peripheral activity but a vital dimension of child health and development. It recommends that schools, families, and communities adopt policies and practices that actively promote a balanced lifestyle, integrating both structured and unstructured leisure opportunities into children's daily routines.

Keywords: Leisure activities, young learners, child health, mixed-methods research, physical well-being, mental well-being, structured play, outdoor education, psychosocial development, holistic development

1.0 Introduction

Childhood is a critical stage of development where learning, growth, and socialization are strongly influenced by daily experiences both inside and outside the classroom. Among these experiences, leisure activities play a central role in shaping young learners' physical health, emotional well-being, and cognitive development. Whether through play, sports, creative pursuits, or digital entertainment, leisure provides children with meaningful opportunities to relax, explore, and build essential life skills.

In recent years, the landscape of leisure has undergone significant change. Traditional forms of play, such as outdoor games and physical activities, are often being replaced by screen-based entertainment like video games, online videos, and social media. While technology-driven activities can promote creativity, problem-solving, and digital literacy, they may also contribute to sedentary lifestyles and reduced social interaction if not balanced with active and social forms of play. These evolving dynamic underscores the importance of examining how young learners engage in leisure and how these activities contribute to their overall health.

Given the increasing demands of academics and the influence of technology, it is essential to understand how leisure activities affect the well-being of children during their formative years. By exploring their preferences, participation levels, and perceived benefits, this study seeks to provide a clearer picture of leisure's role in enhancing health outcomes. The findings aim to guide educators, parents, and policymakers in promoting balanced and meaningful leisure experiences that nurture healthy, resilient, and well-rounded learners.

This study aims to explore the types, frequency, and perceived benefits of leisure activities among primary school-aged learners. It seeks to identify the specific contributions of structured and unstructured leisure to children's overall health and to examine barriers that prevent equitable access. The findings will inform more balanced approaches to child development that value leisure as essential, not optional. The study aims to answer the following questions:

1. Profile of the Respondents according to:
    - 1.1 Age
    - 1.2 Gender
    - 1.3 Grade Level
2. What level of leisure activities are most engaged in by primary school-aged learners?
3. How frequently do young learners participate in structured (e.g., sports, arts) and unstructured (e.g., free play) leisure activities?
4. To what extent are the perceived physical, mental, and social health benefits of leisure activities among young learners?

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5. What barriers hinder access to leisure opportunities among young learners in different socioeconomic and environmental contexts?

2.0 Methodology

This section outlines the methodological framework adopted in the study. It details the research design, sampling procedure, data collection instruments, and ethical safeguards implemented to ensure the reliability and validity of findings. By employing a descriptive research design with quantitative analysis, the study provides empirical evidence on how leisure activities influence the health and well-being of young learners, while also considering contextual limitations and ethical responsibilities inherent in working with minors.

2.1 Research Design

This study adopts a descriptive research design, which is appropriate for identifying and summarizing the status of leisure activities and their perceived contributions to the health of young learners.

2.2 Respondents

The respondents of this study were young learners aged 6 to 12 years old, enrolled in selected public and private elementary schools within Cavite. A total of 100 students were chosen using random sampling to ensure a balanced representation across different grade levels, genders, and grade levels. Parental or guardian consent was secured before the students participated in the study, in adherence to ethical research protocols involving minors.

2.3 Research Instrument

The questionnaire consisted of both closed-ended and Likert-scale items, structured to obtain information on the frequency and type of leisure activities as well as perceived effects on physical, mental, and social well-being. To ensure content validity, the instrument was reviewed by experts in education and child development and subsequently revised based on their recommendations.

2.4 Data Collection Procedure

The data collection process was conducted over two weeks in a selected public elementary school in Cavite. After securing the necessary approvals from school administrators and obtaining informed consent from parents or guardians, the researchers coordinated with class advisers to schedule data gathering sessions. The validated questionnaire was administered in person during regular school hours to ensure that the respondents—children aged 6 to 12—were in a comfortable and familiar environment.

2.5 Data Analysis

The data gathered from the complete questionnaires were systematically organized, encoded, and analyzed using descriptive statistical methods. Frequencies and percentages were used to summarize categorical variables such as the types of leisure activities most engaged in by the respondents. Mean scores were computed to determine the average frequency of participation in different activities and the perceived impact on physical, mental, and social health.

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2.6 Ethical Considerations

This study strictly adhered to ethical research standards to protect the rights and well-being of all participants. Before data collection, formal approval was obtained from the school authorities, and informed consent was secured from the parents or guardians of the student-respondents. .

2.7 Statistical Treatment Used

Percentage- it collects each of the groups considered. This was used for the distribution profiling method.

Weighted Mean- According to Keni (2019), weighted mean refers to the type of average wherein weights are assigned to individual values to identify the corresponding importance of each observation. Measure each respondent's Preservation, Influence, and Significance.

Point	Scale Range	Explanation
4	3.00 – 4.00	Strongly Agree
3	2.00 – 2.99	Agree
2	1.00 – 1.99	Disagree
1	0.99 – 1.00	Strongly Disagree

3.0 Results and Discussion

This section presents the findings of the study on leisure activities and their contributions to the health of young learners. Results are organized into five major areas: (1) demographic profile of respondents, (2) types of leisure activities, (3) frequency of participation, (4) perceived health benefits, and (5) barriers to leisure participation. Each table is accompanied by an interpretation and discussion of its implications, drawing connections to existing literature.

3.1 Profile of Respondents

Table 1: *Profile of the respondents according to Age*

Age Bracket	Frequency	Percentage
6 - 8	0	0
9 – 11	70	70%
12 - 14	30	30%
Total	**100**	**100%**

The majority of respondents were 9–11 years old (70%), while 30% were 12–14 years old. No respondents belonged to the 6–8 age bracket. This suggests that the study sample primarily reflects middle to late childhood perspectives, which is critical as this stage is marked by increased peer interaction and higher exposure to structured and digital leisure activities. This aligns with developmental literature (Erikson, 1968), which highlights late childhood as a key stage for socialization and identity formation.

Table 2. *Profile of the Students according to Gender*

Gender	Frequency	Percentage
Male	63	63%
Female	37	37%
Total	**100**	**100%**

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Males (63%) outnumbered females (37%), indicating a gender imbalance in the sample. This higher male representation may partly explain the dominance of screen-based and physical activities, which literature suggests are often more common among boys (Timonen et al., 2021). The gender skew should be considered when interpreting results, as female perspectives on leisure may be underrepresented.

Table 3. *Profile of the Students according to Grade Level*

Grade Level	Frequency	Percentage
Grade 3	41	41%
Grade 4	29	29%
Grade 5	21	21%
Grade 6	9	9%
Total	**100**	**100%**

Most respondents were in Grade 3 (41%) and Grade 4 (29%), showing stronger representation from lower grade levels. This age/grade concentration suggests that leisure patterns reported here are more characteristic of younger elementary learners, who may prioritize play and screen-based activities over more structured, skill-oriented pursuits like music or organized sports (Mygind et al., 2023).

3.2 Types of Leisure Activities

Table 4. *Types of Leisure Activities*

What activities do you enjoy the most?	Frequency	Percentage
Playing outside or doing sports	9	9%
Watching cartoons or YouTube	35	35%
Playing video games	32	32%
Reading books or comics	6	6%
Drawing, singing, or music	3	3%
Talking with friends (online or in person)	15	15%
Total	**100**	**100%**

Screen-based activities dominated, with watching cartoons/YouTube (35%) and video gaming (32%) most preferred. Traditional physical activities, such as outdoor play/sports (9%), and creative pursuits, like drawing or music (3%), were less common. This reflects a shift in leisure landscapes towards digital media, consistent with findings by Twenge & Campbell (2021), who observed increased sedentary screen use among children. While digital leisure can foster creativity and connection (Uhls et al., 2023), excessive screen use risks physical inactivity and reduced face-to-face interactions.

3.3 Frequency of Participation

Table 5. *Frequency of Participation*

How often do you do structured activities like sports, arts, or music classes?	Frequency	Percentage
Every day	92	92%
A few times a week	5	5%
Once a week	3	3%
Sometimes	0	0%
Never	0	0%
Total	**100**	**100%**

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An unexpectedly high 92% reported daily participation in structured activities, which may reflect either active school programming or over-reporting due to social desirability bias. While positive, this finding contrasts with global trends that show children are increasingly sedentary (WHO, 2020). Future studies should triangulate self-reported data with observational or parental reports to enhance the validity and reliability of the findings. The result, however, highlights that structured activities remain central in children's lives, providing opportunities for discipline, teamwork, and creativity (Kokandakar et al., 2024).

3.4 Perceived Health Benefits

Table 6 *Perceived Health Benefits*

What do you feel after doing leisure activities?	Weighted Mean	Standard Deviation	Verbal Interpretation
I feel happier	3.07	0.951367437	Strongly Agree
I feel more relaxed	2.77	0.881532756	Agree
I feel stronger or healthier	2.9	0.921954446	Agree
I make more friends	2.92	1.026450194	Agree
I feel smarter or more focused	3.34	0.839702328	Strongly Agree
I don't feel any different	3.12	0.930376268	Strongly Agree
Composite Weighted Mean	**3.04**	**0.925230571**	Strongly Agree

Respondents strongly agreed that leisure enhanced focus (M = 3.34) and happiness (M = 3.07). However, the high mean for *"I don't feel any different" (3.12)* suggests some students may not consciously connect leisure to health benefits, highlighting the subjective nature of self-report data. Overall, the composite mean of 3.04 indicates a strong consensus that leisure contributes positively to emotional, social, and cognitive health. This aligns with Timonen et al. (2021), who found socially rich leisure environments protective against later mental health risks.

3.5 Barriers to Leisure Participation

Table 7 *Barriers to Leisure Participation*

What makes it hard for you to do your favorite activities?	Weighted Mean	Standard Deviation	Verbal Interpretation
No space or park nearby	2.97	1.024255827	Agree
Too much schoolwork or homework	2.59	1.281366458	Agree
Not enough time	2.66	1.210123961	Agree
It costs too much money	2.92	1.045753317	Agree
No one to play or do it with	2.89	0.881986394	Agree
I'm not allowed, or it's unsafe	2.84	1.065082156	Agree
Nothing stops me	2.46	1.117318218	Agree
Composite Weighted Mean	2.76	**1.089412333**	**Agree**

Key barriers included lack of safe spaces (M = 2.97) and financial costs (M = 2.92). Academic workload was also a constraint (M = 2.59). The relatively high variability (SD = 1.09) suggests uneven experiences, likely due to socioeconomic differences. These findings echo Chawla et al. (2021), who emphasized that access to green and safe spaces is essential for children's resilience and well-being.

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Addressing environmental inequities and resource gaps is therefore critical in promoting equitable leisure opportunities.

4.0 Conclusion

The findings reveal that many respondents are in middle to late childhood, with a higher representation of males and lower grade levels, which likely shapes their leisure activity patterns. Screen-based activities dominate their preferences, while creative and literacy-oriented pursuits are less common. Participation in structured activities is remarkably high, with most engaging daily. Students generally perceive leisure as highly beneficial, citing improvements in focus, mood, and social connections, with responses showing consistent agreement. However, barriers such as limited space, time constraints, and costs affect participation to varying degrees, indicating that these challenges are not uniformly experienced. Overall, the results suggest that while leisure is valued and regularly practiced, targeted interventions—such as improving access to safe spaces and diversifying activity options—could further enhance participation and broaden the range of benefits.

4.1 Recommendations

Schools and parents should promote a balanced mix of leisure activities, combining screen-based, physical, and creative pursuits. Family involvement and school programs can strengthen positive habits, while responsible use of technology ensures healthier engagement. Barriers such as limited resources and safe spaces must be addressed to provide equal opportunities for all learners.

5.0 Contributions of the Author

All authors contributed equally to the conception and design of the study, data collection, analysis, and interpretation of results. They also collaborated in drafting, revising, and finalizing the manuscript. Each author approved the final version of the paper and agrees to be accountable for its contents.

6.0 Conflict of Interests

The authors declare that they have no known competing financial or non-financial interests that could have appeared to influence the conduct or outcomes of this study.

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