




## Assessment of the Numeracy Tutorial Service of Project KaISIPnayan: Inputs to the Sustainable Extension Program

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### Abstract

This study provides an overview of an assessment conducted on the numeracy tutorial service, namely Project KaISIPnayan. This study aims to evaluate the effectiveness and sustainability of the program, with the objective of enhancing its extension initiatives. By examining the inputs required for a sustainable extension program, this assessment provides valuable insights into the long-term viability and impact of the numeracy tutorial service. The research employs a mixed-methods approach that combines data analysis and qualitative analysis. The quantitative phase entails delivering pre- and post-tests to participants to assess their improvement in mathematics. In addition, the qualitative phase uses an evaluation form to collect feedback on the numeracy tutorial service to gather comprehensive data. The results reveal the strengths and weaknesses of the program, highlighting key areas for improvement. Furthermore, the data imply that Project KaISIPnayan creates a positive attitude toward mathematics and increases learners' confidence in mathematics. The findings emphasize the importance of program design, trained tutors, adequate resource allocation, and collaborative partnerships to ensure sustainability. The assessment contributes to the development of evidence-based strategies for enhancing numeracy tutorial services and provides valuable inputs for sustaining Project KaISIPnayan's extension initiatives. The findings of this study can guide organizations and educational institutions in designing effective and sustainable tutorial programs that promote numeracy skills among students, empowering them for lifelong success.

**Keywords** *Tutorial Service, Assessment, Implementation, Effectiveness*

### INTRODUCTION

Mathematics is a subject that requires continuous practice and problem-solving skills. The ability to effectively solve problems using various of mathematical techniques is an important life skill that can be applied in real-world situations. Math classes can provide opportunities to improve mathematical performance through various methods. Mathematical performance is a key component of education and a key predictor of intellectual growth and academic performance. Being proficient in mathematics fosters critical thinking, logical reasoning, and mathematical literacy in addition to giving people the ability to solve problems. The ability to comprehend and use mathematical concepts is highly valued in numerous professions, including science, technology, engineering, and finance. Therefore, it is crucial for educators to investigate the aspects that affect mathematics performance and comprehend how to improve it. It includes all the abilities, information, and comprehension needed to work effectively with mathematical ideas and problems. It covers a broad range of skills, including algebraic reasoning, geometric visualization, statistical analysis, and logical thinking. Mathematical competence involves an in-depth knowledge of mathematical principles and the capacity to apply them to real-world problems. Determined efficiently or understanding formulas are not the sole metrics used to assess mathematical proficiency.

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The Philippines received a lower grade in mathematics (353 points) than the worldwide average (489 points) in the 2018 PISA results. In mathematics, the Philippines finished 78th out of 79 participating countries, second to the lowest. It is evident from the inadequate TIMSS and PISA results. Students have trouble understanding the language of mathematics, which might cause misunderstanding. Additionally, due to the mathematical language, students have a hard time understanding the problem or some of its components.

Measuring mathematics performance provides valuable insights into an individual's strengths and areas for improvement. It helps teachers modify instruction to meet students' needs, identify gaps in learning, and provide targeted support. Enhancing one's proficiency in mathematics necessitates a lifetime commitment, consistent effort, and a growth mindset. By developing strong foundational knowledge, sharpening problem-solving techniques, and cultivating a deep understanding of mathematical concepts, individuals can enhance their performance and unlock new possibilities in their academic and professional pursuits.

### **LITERATURE REVIEW**

[Culaste and Culaste-Quimbo \(2011\)](#) found that while grade six students in District 1, Quezon, Bukidnon, had above average cognitive skills in symbol comprehension, they had below average abilities in numerical comprehension, simple linguistic sentences, contextual information, mental visualization, number system knowledge, relevant information, and number sense estimation. Performance in mathematics is a measure of an individual's ability to understand and apply mathematical concepts and skills. It encompasses a range of factors, including knowledge, problem-solving abilities, critical thinking, and numerical fluency. High performance in mathematics indicates a strong grasp of mathematical concepts and the ability to solve complex problems effectively.

Students in their third and fourth years of studying mathematics as their major in the Bachelor of Secondary Education program provided by the College of Education at Taguig City University lead the Numeracy Tutorial Service of Project KaSIPnayan, an extension program. According to [Leagans \(1961\)](#), an "extension program" is "a set of clearly defined, consciously conceived objectives or ends derived from an adequate analysis of the situation and to be achieved through an extension teaching activity." Its objective is to educate the students in Barangay Maharlika Village who are at the intermediate level by teaching numeracy twice a week, beginning in the third week of March and ending in the third week of April. Children will participate in a variety of mind-boggling activities, as well as receive training in fundamental mathematical skills, with this activity. This program was also designed to motivate students at the intermediate level to have a better attitude toward mathematics and improve students' performance in mathematics.

### **RESEARCH METHOD**

A mixed method-integrated research approach was employed, where data from both quantitative and qualitative sources were collected concurrently. This method includes a one-shot pretest-posttest design for the quantitative data collection to assess the mathematical performance of the participants before and after the implementation of the Numeracy Tutorial Service of Project KaSIPnayan. The mixed-method design for this study also included open-ended questions for the qualitative data collection to evaluate the effectiveness of the program. This was also used to comprehend participants' experiences and perspectives regarding the program ([Christensen et al., 2020](#)).

Convenience and volunteer sampling were used in this study, which allowed researchers to collect data swiftly and effectively by selecting the most easily available subjects. Volunteer sampling is a non-probability sampling method in which the study participants voluntarily choose

to participate or self-select. Simply stated, those who are personally involved in the subject matter or who are engaged in the research project are more likely to participate than those who are not (Murairwa, 2015).

**Table 1.** Frequency of Each Grade Level

Grade Level	Frequency	Percentage
Grade 4	4	17%
Grade 5	14	61%
Grade 6	5	22%
<b>Total</b>	23	100%

As shown in the table above, the total population of the participants was twenty-three (23) students with intermediate levels residing at Maharlika Village, Taguig City. Four (4) of the participants were grade 4 (17%), fourteen (14) were Grade 5 (61%) and five (5) participants were Grade 6 (22%). The purpose of this study was to evaluate how well Project KaSIPnayan's Numeracy Tutorial Service had improved the intermediate-level math performance of its participants in Maharlika Village, Taguig City.

Participants at the middle level in Maharlika Village voluntarily choose to participate in the data collection. In the tutorial class, we had covered the following topics: mathematical terms, measures in order pattern and algebra, numbers, and number sense. This study evaluated the learning environment, tutors, and program as well. A survey and an evaluation form that the participants would complete would be used to perform the study. The research survey was completed by twenty-three (23) participants. The survey and research results were the only limitations of the information gathered.

Pre-test and post-test questionnaires, as well as an evaluation form, were the two research instruments employed in this study. Based on the Department of Education's K-12 Curriculum Guide Mathematics, a distinct test questionnaire was distributed for each grade level. The questionnaires used for the pre-test and post-tests each contained 40 items. The research instrument conducted a validation phase with multiple instructors, who assigned a score indicating the tool's suitability for usage and gathered student data. The research instrument for grade levels 4 and 6 received an average score of 4.67, while the research instrument for Grade 5 received 4.33. It surpassed the passing score of 3.50, which means that the instrument is reliable and valid.

Additionally, the researchers evaluated the performance of Project KaSIPnayan's Mathematics Tutorial Service using an assessment form. This would also be utilized to collect statistics and information regarding the previously mentioned program and what had to be improved to get ready for the next numeracy program to be implemented. The program, the tutors, and the learning environment were the three structural components that comprised the evaluation form. In addition, there was an open-ended survey that the participants answered based on their experiences using the numeracy program's teaching services. This also went through a validation process that gained an average score of 4.67, which also surpasses the passing score of 3.50, which indicates that the instrument is reliable and valid.

The Project KaSIPnayan Numeracy Tutorial Service was proposed by the researchers to

the Taguig City University Extension director and the OIC Dean of the College of Education. The researchers presented the program to the Chairperson of Barangay Maharlika Village for approval after receiving permission to conduct the study from the OIC Dean and the director of the extension program. On March 25, 2023, the researchers will begin the program after receiving approval from the barangay chairman. A pre-test assessment was performed by every enrolled student before the tutoring session began. The test was used to obtain the baseline. This includes current knowledge or activities linked to the study's topic based on their grade level. The tutorial days were allocated for every Saturday and Sunday to obtain the four weeks. The meetings typically consisted of topics based on the K-12 Mathematics Curriculum Guide and which the topics were to be discussed or taught.

The program ends on April 30, 2023, and participants are given a post-test questionnaire to assess any changes in their mathematical performance. To maintain consistency in the data, the questions in the post-test questionnaire are similar to those in the pre-test questionnaire. This made it possible for researchers to evaluate the program's success by comparing the information from the two surveys. As the program ends, the participants are also given an evaluation form to assess the Numeracy Tutorial Service of Project KaSIPnayan regarding its effectiveness and to know if there's a need to improve in preparation for the next implementation of a numeracy program.

## FINDINGS AND DISCUSSION

**Table 2.** Pre-Test and Post-Test Results of the Grade 4 Participants

Student	Score	
	Pre-test	Post-test
1	24	30
2	8	27
3	6	21
4	13	20
Mean	12.8	24.5
SD	8.06	4.80

To determine the performance of the respondents, pre- and pos-test were conducted which comprised of forty (40) questions in a multiple-choice format which is aligned to K-12 curriculum guide mathematics of the Department of Education. From the said assessment, table 1 presents the pre-test scores for grade four participants exhibited a wide range, from 6 to 24. The mean score of 12.8 indicates an average performance level, but the substantial standard deviation of 8.06 suggests heterogeneity in pre-existing mathematical abilities. After the implementation of tutorial class, the test scores that can be obtained in the lowest and highest ranges are 20 to 35. The post-test scores ranged from 20 to 30, with a mean post-test score of 24.5 and a standard deviation of 4.80. The standard deviation is smaller compared with the pre-test scores, indicating that the post-test scores are less spread out from the mean. Analysis of the pre- and post-test scores in Table 1 revealed a consistent pattern of improvement across all participants. This finding suggests a positive impact of the intervention on student performance. Student 1 showed an increase from 24 to 30 points, representing a positive improvement of 6 points. Student 2 showed a significant improvement of 19 points, from 8 to 27, demonstrating substantial progress for this student. Student 3, this student's score increased from 6 to 21, indicating a positive change of 15 points. While Student 4 showed a pre-test score of 13 that increased to 20 on the post-test, it's important to note that this still represents a positive change of 7 points.

These results indicate that the numeracy tutorial service had a positive impact on the students' performance, as reflected in the students' scores generally improved, as shown by the higher post-test scores compared with the pre-test scores. However, it's important to note that individual students may respond differently to numeracy tutorial services. Additionally, the relatively high standard deviation of the pre-test scores indicates that some students initially had lower performance levels, potentially requiring additional support or targeted interventions.

**Table 3.** Pre-Test and Post-Test Results of the Grade 5 Participants

Student	Score	
	Pre-test	Post-test
1	19	29
2	18	33
3	17	34
4	17	30
5	17	33
6	15	28
7	15	27
8	14	30
9	14	28
10	13	25
11	13	21
12	11	23
13	10	29
14	8	23
<b>Mean</b>	14.4	28.1
<b>SD</b>	3.18	3.97

To assess the performance of grade five students who are respondents to this study, a forty (40) item test that is devised to their grade level was conducted before and after implementation of the program. Table 3 provides the pre-test and post-test scores for 14 students from grade five respondents. These scores can be used to assess the students' academic progress or improvement over time. The pre-test scores exhibited moderate variability, ranging from 8 to 19 with a mean of 14.4. This is reflected in the standard deviation of 3.18, indicating that student performance levels were relatively close to the average on the pre-test. When the tutorial session ends, the test score can range from 25 to 35, which is the lowest and highest possible range. The post-test scores demonstrated a wider range, encompassing values from 21 to 34. The mean post-test score of 28.1 and standard deviation of 3.97 indicate moderate variability in post-test performance. The standard deviation is slightly larger compared to the pre-test scores, indicating a slightly wider spread of scores from the mean. However, the overall variability in the post-test scores is still relatively low. Overall, the post-test scores are higher than the pre-test scores for all students, indicating an improvement in performance after the intervention. Students 2, 3, 4, 5, 8, 13, and 14 demonstrated particularly notable improvements, ranging from 15 to 19 points. This finding highlights the potential for significant advancement through participation in the intervention. Students 1 and 11 showed the least improvement, with increases of 10 and 8 points respectively. Despite the varying degrees of improvement, all students demonstrated an increase in their post-test scores compared with their pre-test scores.

The results indicate that the analysis of pre- test and post-test scores reveals a significant and consistent improvement in student performance following the numeracy tutorial service. This is further supported by the low standard deviations for both sets of scores, indicating minimal variation in individual responses and a broadly positive impact across the participants.

Astrero (2023) concludes that problem-based learning is a strategy that motivates students to actively participate in their education by investigating alternative approaches to solving word problems. The results of the study showed that employing such a strategy aided learners' development, if not improvement, of their critical and creative thinking skills. Educators are then pushed to maximize the benefits of problem-based learning to ensure that students are given learning opportunities that challenge their critical and creative thinking. Additionally, given the new normal and many learning modes, it is urged that instructors, who are at the forefront of education, develop novel approaches to assist create a more conducive learning environment.

**Table 4.** Pre-Test and Post-Test Results of the Grade 6 Participants

Student	Score	
	Pre-test	Post-test
1	16	38
2	11	21
3	10	28
4	7	38
5	4	31
Mean	9.60	31.20
SD	4.51	7.19

Table 4 presents the pre- and post-test scores of the five students. A forty (40) item test that is designed for grade 6 students was used to determine the performance of the participants. Their pre-test scores exhibited moderate variability, ranging from 4 to 16. The average pre-test score was 9.60, with a standard deviation of 4.51. This indicates that student performance demonstrated some dispersion around the mean, suggesting a mix of individual strengths and weaknesses. This indicates that the students' initial performance varied, with some students scoring higher than others. The post-test scores of the students ranged from 21 to 38. The lowest and highest ranges that can be achieved in this test are 25 to 35 test scores after they end the tutorial session. The average post-test score for all students is 31.20, with a standard deviation of 7.19. Compared with the pre-test scores, the students' scores generally improved after the test. The post-test scores also show variation among the students, with some students showing more improvement than others. Thus, we can calculate the difference between the post-test score and the pre-test score for each student. The improvement scores range from 5 to 21. This means that some students made significant progress, whereas others made relatively smaller gains. The average improvement in scores is calculated by subtracting the average pre-test score from the average post-test score, which gives us  $31.20 - 9.60 = 21.60$ . This suggests that, on average, the students' scores increased by 21.60 points after the test. Looking at the individual student scores, we can see that some students had larger improvements than others. Student 1 had an improvement of 22 points (from 16 to 38), and student 3 had an improvement of 18 points (from 10 to 28). Student 5 had an improvement of 27 points (from 4 to 31), and student 4 had an improvement of 31 points (from 7 to 38). These variations indicate that the impact of the test on student performance differed among the students. However, student 2 showed an improvement of 10 points (from 11 to 21). The varying improvement across students suggests that the test's influence differed among them. Examining the standard deviations of both pre-test and post-test

scores illuminates the extent of this distribution, revealing valuable information about the diversity of outcomes. A higher standard deviation indicates a wider range of scores. In this case, the post-test scores had a higher standard deviation (7.19) than the pre-test scores (4.51). This suggests that there was more variability in the students' performance after the test than before.

Therefore, the test results indicated a positive shift in overall student performance, and individual trajectories diverged. Some students demonstrated remarkable growth, exceeding the mean score increase, whereas others experienced more modest gains. The results also indicate a wider range of scores and more variability in the post-test scores than in the pre-test scores. Students have a positive attitude toward arithmetic despite their subpar results as reflected in the research of Valdez (2016). Self-confidence, success orientation, and defense tendency of the forecasters have little to no influence on how well they perform. Regarding the children's performance in mathematics, the mathematics instructor was the sole predictor that was shown to be strongly connected. The public's opinion of arithmetic and instructors must be improved. To accommodate the diverse learning needs of individual students and drive improvement in their mathematical abilities, the implementation of a tailored intervention program must be developed.

### Assessment of the Project KaISIPnayan

The primary objective of this program evaluation was to assess the efficacy of Project KaISIPnayan's Numeracy Tutorial Service in enhancing the mathematical competencies of intermediate-level participants within Barangay Maharlika Village, Taguig City. The program assessment has three components: program, tutors, and logistics. The questionnaire responses were divided into five categories, namely disagree (1), strongly agree (2), moderately agree (3), agree (4), and strongly agree (5).

**Table 5.** Assessment of the Project KaISIPnayan in Terms of the Implementation of Program

Indicators	Mean	Verbal Interpretation
The program content met the numeracy needs of the children.	4.78	Strongly Agree
The length of the program was just sufficient.	4.35	Strongly Agree
Increases knowledge in the program content.	4.78	Strongly Agree
The program content was presented and organized.	4.39	Agree
The program was presented clearly and effectively.	4.65	Strongly Agree
Program met the stated objectives.	4.21	Agree
<b>Overall Mean</b>	4.53	Strongly Agree

Legend: 4.51-5.00 (Strongly Agree); 3.51-4.50 (Agree); 2.51-3.50 (Moderately Agree); 1.51- 2.50 (Slightly Agree); 1.00-1.50 (Disagree)

Table 5 summarizes the participant evaluations of the program's execution by displaying the mean score for each element. This table reveals that the participants strongly agree with statements regarding on the implementation of Project KaISIPnayan, as indicated by the overall

mean of 4.53. The participant feedback indicated substantial positive evaluation of the program's content meeting their numeracy needs, as evidenced by the highest weighted mean of 4.78 and a dominant "strongly agree" verbal interpretation. The data reveal a parallel between the exceptionally positive assessment of the program's content relevance and the increase in knowledge experienced by participants, as evidenced by the shared highest weighted mean of 4.78 and the prevalent "strongly agree" response. Followed by the program was presented clearly and effectively with a weighted mean of 4.65 and verbal interpretation of strongly agree). The program content was presented and organized (Weighted Mean = 4.39 with agreed verbal interpretation). The program's length received positive feedback from participants, evident in the weighted mean of 4.35 and the most frequent verbal interpretation of "strongly agree." This suggests satisfaction with the duration of the program. Furthermore, the program met the stated objective gained the lowest weighted mean 4.21 with verbal interpretation of agree). This implies that the program content of Project KaISIPnayan has met the numeracy needs of the participants and that it increases knowledge in the program content.

According to [Pellegrini et al. \(2021\)](#), implying that low performers can make significant progress in mathematics if they receive relatively inexpensive small group tutoring. Studies have demonstrated the effectiveness of programs that encourage cooperative learning and implement strong classroom management strategies. Tutoring can be provided in a one-on-one setting with an instructor or teaching assistant, or in small groups of two to six students led by the same individuals.

**Table 6.** Assessment of the Project KaISIPnayan in Terms of Tutor's Behaviors.

Indicators	Mean	Verbal Interpretation
The teaching style was effective.	4.87	Strongly Agree
Make clear instructions and demonstrations.	4.83	Strongly Agree
Demonstrates sufficient mastery of his/her topic.	4.17	Agree
Instructional aids were used effectively.	4.65	Strongly Agree
Comfortable to ask questions.	4.48	Agree
Encourage student participation.	4.57	Strongly Agree
Manages the time well.	4.26	Agree
<b>Overall Mean</b>	4.55	Strongly Agree

Legend: 4.51-5.00 (Strongly Agree); 3.51-4.50 (Agree); 2.51-3.50 (Moderately Agree); 1.51- 2.50 (Slightly Agree); 1.00-1.50 (Disagree)

Table 6 shows the mean distribution of the evaluation of the respondents in terms of the behaviors of the tutors. The table presents an overview of participant evaluations regarding tutor behavior, indicating a high level of agreement with an overall mean score of 4.55. Their assessment is certified with the following responses: Teaching style was effective with a highest weighted mean of 4.87 with verbal interpretation of strongly agreed. Followed by clear instructions and demonstrations (Weighted Mean = 4.83 with verbal interpretation of strongly agree). The data



indicate a highly positive assessment of the program's instructional aids, reflected by a weighted mean of 4.65 and the prevalent verbal interpretation of "strongly agree." Additionally, encourage student participation (Weighted Mean = 4.57 with verbal interpretation of strongly agree). Moreover, it is comfortable to ask questions with a weighted mean of 4.48 and verbal interpretation of agree. Managed the time well, with a weighted mean of 4.26 and verbal interpretation of agree. Lastly, despite the relatively low score (4.17) and 'agree' response for 'demonstrating mastery,' overall feedback indicates that the teaching style was effective. This potential discrepancy warrants further investigation to determine whether other factors contributed more significantly to participant satisfaction.

Tutors expressed a strong desire for active involvement in the teaching process with learners, citing its positive impact on both enhancing their understanding of numeracy and facilitating knowledge acquisition. Based on their awareness of the potential learning barriers children face in mathematics, the tutors conceptualized a program that addressed both social and academic aspects, employing targeted modifications to mitigate the difficulties children encounter in traditional classroom environments. proposed that might lessen some of the difficulties children have in the classroom (Zwyer, 2011). Overall, it was found that the math tutoring program had a beneficial impact on tutors and that it gave the participants a sense of competence and the capacity to change other people's lives.

**Table 7.** Assessment of the Project KaSIPnayan in Terms of Learning Environment

Indicators	Mean	Verbal Interpretation
The location was convenient.	3.78	Agree
The meeting time was convenient.	4.35	Agree
The room was comfortable, accessible, and appropriate.	4.35	Agree
<b>Overall Mean</b>	4.16	Agree

Legend: 4.51-5.00 (Strongly Agree); 3.51-4.50 (Agree); 2.51-3.50 (Moderately Agree); 1.51- 2.50 (Slightly Agree); 1.00-1.50 (Disagree)

Table 7 shows the participants' assessment in terms of the learning environment. The data presented in this table indicate a high level of agreement among participants with the statements presented in the classroom setting, as reflected by the overall mean score of 4.16. Their evaluation is substantiated by the following responses: The location was convenient with the highest weighted mean of 3.78, and the verbal interpretation of agree. Analysis of participant feedback revealed a high level of agreement (mean 4.35, "agree") regarding the convenience of the meeting time and the comfort, accessibility, and appropriateness of the room. This implies that the learning environment was effective regarding the meeting time being convenient and the room being comfortable, accessible, and appropriate.

Recognizing the influence of the environment on learning, this statement emphasizes the role of diverse contexts, including unstructured settings, in facilitating student knowledge acquisition. A study of Akomolafe and Adesua (2015) confirmed that the classroom environment has a considerable impact on secondary school pupils' performances. The relationship between classroom environment and student performance has been well-documented, including the potential impact on factors such as attentiveness and concentration. This suggests the need for

careful consideration of environmental factors when designing and managing learning spaces for the students.

### Results of the Survey Questionnaires

To capture the subjective dimension of the program's impact, the researchers incorporated open-ended survey questions about participation in the second part of the evaluation form. In question 1, the respondents were asked, what did you like the most about this Project KaISIPnayan? Two response themes emerged that asked respondents (22 out of 23 students, or 96%) what they loved best about the project KaISIPnayan. When asked about the first theme, 48% of respondents (11 out of 23) indicated that it was associated with better comprehension during tutorial sessions. The students stated "*dahil po sa programang ito, may bago at marami po kaming natutunan*" ("because of this program, there are new and many things we have learned"). The second response theme was eleven respondents additionally identified a recurrent theme related to the tutor's instructional techniques and personal interactions, suggesting their potential influence on student outcomes. Most of the students stated that "*ang kanilang pag-uugali (mabait/mabuti)*" ("their behavior (good)), while another shared "*magaling na pagtuturo ng mga guro*" ("good teaching style of the teachers"). Furthermore, it is observed that a statistically insignificant proportion of respondents (one, or 4%) opted not to answer the relevant evaluation question. This near-complete participation rate (96%) signifies a high level of engagement with the program and potentially underscores the beneficial nature of the tutorial sessions, as evidenced by the overall results. In addition, the efficiency of educators, as well as their attitudes, beliefs, and actions, learning can be influenced by the classroom instructor and the impact they have on student success (Hinds, 2017).

For question 2, the respondents were asked, what did you like the least about this Project KaISIPnayan? The students were response that the least they like about the Project KaISIPnayan, 19 out of 23 students (83%) responded "*wala po*" ("none"). The evaluation process highlighted a query pertaining to the adequacy of the physical learning space currently utilized for program implementation. 3 out of 23 students (13%) stated "*yung init at late yung guro*" ("the room is hot and the teachers are late") and "*yung silid po kase di ako komportable at mainit*" ("I don't feel comfortable in the room and it's hot"). Furthermore, one student (4%) did not answer the question. Examination of the data pertaining to the classroom setting suggests a potential need for refinements to the program's operational framework, as indicated by implicit concerns expressed by respondents.

According to Tan and Gevera (2020), a location that is favorable to learning—is one of the most crucial logistical requirements for the conduct of tutorials. The space must be large, well-lit, well-ventilated, and equipped with furnishings such as seats, tables, and whiteboards. A tutorial room should ideally promote effective and enjoyable learning.

Question 3 asked the students to respond to the yes or no question, did the project kaISIPnayan meet their expectations. Twenty respondents (representing 87% of the student body) submitted affirmative responses to the posed question. Conversely, three students (or 13%) chose not to answer. Analysis of the gathered information reveals a significant congruence between the program's inherent strengths and the identified needs of the student body. Additionally, respondents expressed positive feedback regarding the program's overall usability.

Question 4 also asked the students to respond to the yes or no questions: Would they recommend the Project KaISIPnayan to others, and why. Analysis of the collected data reveals a statistically significant proportion of respondents (91%, or twenty-one individuals) providing affirmative ("yes") answers to the posed question. The predominant rationale offered for their positive response was the program's capacity for facilitating "*marami pong matutunan*" ("we've

learned a lot"). Some shared *"dahil magaling sila magturo at ito ay nakakatulong sa amin"* ("because they teach well and it helps us") and *"para mapalawak ang kaisipan"* ("to expand our knowledge"). The responses show that Project KaISIPnayan adds value to the student's development and academic performance and may continue for the next implementation.

For question 5, how could this program be further improved? the students share their suggestions, 13 of the 23 students (57%) responded. Examination of the evaluation data indicated the emergence of multiple areas of student concern. Among these, a prominent theme involving *"maraming maturuan na bata"* ("an abundance of children in need of education") was identified in the responses of seven individuals (representing 30% of the student body). Two of the students (9%) shared *"maghanap ng magandang room"* ("find a conducive room"). One student (4%) stated "to have more teachers who teach". One other student (4%) shared *"pag-imbiba ng ibang bata na gusto ding matuto sa asignaturang matematika"* ("inviting other children who also want to study/learn mathematics"). Additionally, one other student shared *"pagtangkilik lalo na ng mga guro para sa sunod ay mas mapabuti nila ito"* ("paying attention to the teachers to make it better"). And one other student (4%) stated *"dapat nasa aircon, may pagkain at simula 1:00 pm hanggang 4:00 pm"* ("there should have an airconditioned room, with food and starting from 1:00 pm to 4:00 pm"). It is observed that a notable portion of the student body (43%, or ten individuals) chose not to respond to the inquiry concerning Project KaISIPnayan. However, analysis of the submitted responses from engaged students revealed insightful suggestions for program enhancement, highlighting potential aspects requiring optimization for improved implementation effectiveness. Analysis of Project KaISIPnayan reveals opportunities for enhancement within its core framework and operational procedures, as highlighted by [Tan and Gevera \(2020\)](#).

## CONCLUSIONS

This study aimed to evaluate the efficacy of Project KaISIPnayan's Numeracy Tutorial Service and improve the intermediate-level participants' math performances. The program's strategy probably entails giving students opportunities to participate in practical activities, problem-solving exercises, and real-world situations that require the use of numeracy abilities. Assessing the implementation and usage of this program is critical. The feedback regarding the quality and its impact on the mathematics performance of the intermediate-level participants will help the organization in this study to determine if this program is yielding a positive return on investment.

The findings allowed the researchers to assess the effectiveness of the numeracy tutorial service and how it affects participants' mathematical proficiency. The following conclusions are drawn:

1. At the start of the implementation of Project KaISIPnayan, participants' performance in mathematics was noticeably low; however, following the program's launch, participants' performance significantly improved.
2. This study concluded that the Project KaISIPnayan, has a significant impact on the performance of participants in grades five and six. On the other hand, simply is not any discernible variation in fourth-grade students' performance when the numeracy tutorial service is used.
3. The program aims to demonstrates the potential of Project KaISIPnayan offers as a long-term Numeracy program and the need for its location to be improved.

The outcomes of this study provided significant data about the implications of the Project KaISIPnayan Numeracy Tutorial Service, which was implemented to improve the participants' intermediate-level mathematical skills. As previously stated, Project KaISIPnayan, which was

intended to improve the mathematical performance of students who voluntarily enrolled in the program, was implemented into practice in Maharlika Village Taguig City from the third week of March to the final week of April.

The researchers aim to assist participants develop their ability to assess issues, use mathematical procedures, and evaluate solutions. Furthermore, Project KaISIPnayan is anticipated to promote the development of mathematical performance alongside numeracy skills. According to Nickow et al. (2020), tutoring programs are among the most adaptable and potentially revolutionary learning program types accessible from Pre-K to 12th grade. Our review's meta-analytic findings illustrate not only the efficacy of tutoring but also its versatility, with effect sizes averaging more than a third of a standard deviation and impacts consistently significant across a wide variety of program and research variables. Tutoring services will undoubtedly be a major workhorse policy approach as personalized learning gains importance in today's educational systems. Overall, the Numeracy Tutorial Service of Project KaISIPnayan can greatly improve mathematics performance by integrating numeracy, and critical thinking by providing students with a strong foundation in these areas.

#### **LIMITATION & FURTHER RESEARCH**

This study focuses on assessing the Numeracy Tutorial Service of Project KaISIPnayan in enhancing the mathematics performance of the participants who are at the intermediate level in Maharlika Village Taguig City. Data collection will be voluntarily selected by the participants in Maharlika Village who are at the intermediate level. The topics that have been discussed in the tutorial class are Number and Number Sense, Pattern and Algebra, Geometry, and Measurements. This study also assesses the program, tutors, and the learning environment. The study will be conducted through the utilization of a questionnaire and an evaluation form that will be answered by the participants. There were twenty-three (23) participants who responded to the research survey. The findings gathered are limited only by the results of the survey in research. The future study can use this study as a reference to conduct a longitudinal study to determine the long-term impact of Project KaISIPnayan on the students' mathematics performance and apply this numeracy program to any grade level.

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