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Assessing the Initial Outcome of the National Learning Camp (NLC) in the Mathematical Skills of the Early Graders: Case of San Agustin Elementary School, Carmen District

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A B S T R A C T

This study investigated the implementation of the National Learning Camp (NLC) in San Agustin Elementary School, Carmen District, Agusan del Norte, focusing on its impact in strengthening foundational mathematics skills among early grade learners. Using a qualitative phenomenological design, the experiences of 38 learners and 6 teachers were explored through validated interviews and focus group discussions. Findings revealed significant improvements in math proficiency, with a shift from 61% of learners in the Intervention Camp to 68% in the Enhancement Camp after the NLC. Key success factors included differentiated instruction, culturally relevant strategies, peer collaboration, and teacher development. However, challenges such as limited resources, low parental involvement, and inconsistent learner grouping affected the program's overall effectiveness. The study concludes that the NLC holds strong potential in addressing early grade math deficits. It recommends enhanced teacher training, better resource provision, structured monitoring systems, and stronger stakeholder engagement to maximize its impact and sustainability.

Keywords: **National Learning Camp, Mathematical Skills, Early Grade Learners, Differentiated Instruction, and Educational Intervention**

1. INTRODUCTION

Mathematical literacy is one of the fundamental skills that the students should acquire at an early stage of learning. In the early grades 1 to 3, the basic arithmetic skills include number identification, number comparison, numeration, the four basic processes (addition, subtraction, multiplication, and division), measurement, and geometry. These are building blocks to deeper mathematical learning and to long-term academic success. Unfortunately, we have seen math deficits even in its very basics in the whole country. National evaluations and independent studies indicate that too few children are competent in early math skills.

Kunwar and Sharma (2020) stressed that a good grounding in mathematics also makes children good thinkers, positive problem solvers, and analytical reasoners. These are not just academic skills — they are practical tools for everyday living. Their findings highlight the need for strong mathematical training beginning from an early age.

This issue was also mentioned in an article by Chi on Philstar.com, dated 2023. In the article, Chi discussed the Philippines' poor situation in reading in the 2018 Programme for International Student Assessment (PISA) results, where the Philippines ranked last in reading and second in science and mathematics out of 79 countries. The flaws in these three academic areas became very critical and prompted actions from all stakeholders (educators and policymakers), which led the Department of Education to quickly pursue solutions to mitigate the deficit of knowledge.

One such response took the form of DepEd Order No 014, s. 2023, when the National Learning Camp originated. This program is a post-pandemic recovery plan developed to help students' academic recovery. The National Learning Camp has three learning camps: Enhancement Learning Camp, Consolidation Learning Camp, and Intervention Learning Camp. Students with gaps in their foundational skills in particular areas, namely, math and reading, will attend the Intervention Camp. Students who met, to some extent, grade level expectations in the last year will be supported at the Consolidation Camp. Finally, the Enhancement Camp extends to students who have experienced an even greater level of learning. Students are determined to be eligible for one of the three camps based on the results of their Rapid Mathematics Assessment (RMA). Learners with a score less than 75% will attend the Intervention camp, those with scores from 75 to 84.99% will attend the Consolidation camp, and learners with a score over 85% will attend the Enhancement camp.

DepEd has also released DepEd Order No. 010, s.2025, to reinforce this framework even more. It offers revised guidelines for managing summer learning initiatives, such as the Summer Academic Remedial Program and the NLC, and it was released on April 7, 2025. In order to avoid interfering

with regular classes, these programs are conducted during school breaks. Funding is provided by the Basic Education Curriculum – National Learning Recovery Program (BEC-NLRP), and participation is entirely voluntary. Additionally, the order guarantees that off-campus safety regulations are adhered to and that no additional fees are collected from students.

These guidelines were closely adhered to when implementing the NLC at San Agustin Elementary School in the Carmen District of Agusan del Norte. Each student's standing was ascertained through a Rapid Mathematics Assessment. Out of all participants, 23 were assigned to the Intervention Camp, 5 to the Consolidation Camp, and 10 to the Enhancement Camp, according to the results. It was evident that many students were still having difficulty with basic math concepts. In order to address this, DepEd arranged a three-week NLC that concentrated on important math concepts like geometric shapes, number recognition, and fundamental operations. Before the program started, parents and teachers received orientation to make sure everything was in line with DepEd standards and functioned properly.

The purpose of this study is to evaluate the first results of the National Learning Camp at San Agustin Elementary School, Carmen District, particularly on how the program has improved students in the lower grades' ability to perform mathematics. This study will document the real experiences of teachers and students to examine the things that worked, things that didn't, and things that could be improved. The ultimate objective is to offer insights that can be used to enhance the curriculum, enhance teaching, and guarantee that each early grader develops a solid mathematical foundation.

1.1 Research Questions

This study will seek to answer the following queries:

1. What are the initial experiences of teachers and learners of the early graders on the National Learning Camp implementation in San Agustin Elementary School, Carmen District?

2. What are the initial gains of learners in the implementation of National Learning Camp on Mathematics skills in number identification, number discrimination, the four fundamental operations, basic geometry, and measurement in San Agustin Elementary School, Carmen District?

3. What are the facilitating factors of teachers and learners in the implementation of the National Learning Camp in San Agustin Elementary School, Carmen District?

4. What are the hindering factors of teachers and learners in the implementation of the National Learning Camp in San Agustin Elementary School, Carmen District?

5. Based on the findings of the study, what improved strategies can be integrated in the implementation of the National Learning Camp (NLC) in San Agustin Elementary School, aligned with the updated DepEd Order No. 010, s. 2025 guidelines?

2. METHODOLOGY

2.1 Research Design

A qualitative phenomenological research design was used to explore participants' experiences with the National Learning Camp. First and foremost, the research aimed to understand the insights of participants in terms of the initial outcomes of the program and their experience in what supported and inhibited the implementation of the NLC.

The research utilized in-depth interviews and focus group discussions to obtain rich and meaningful data. In addition to understanding the experiences of participants, the study examined the effectiveness of the NLC in enhancing early-grade learners' foundational mathematics skills. The research was able to focus on the qualitative insights of stakeholders in addition to measuring observed outcomes among pupils. This enabled the research to provide a clearer picture of the NLC's role in supporting early years learning.

2.2 Research Respondents/Sampling

The participants in the study were the early graders of San Agustin Elementary School, Carmen District, as well as the teachers who handled the early graders during the National Learning Camp program of the Department of Education.

Table 1 shows the distribution of the participants. As shown in Table 1, 38 learners and six teachers from SAES, Carmen District, attended the National Learning Camp.

Table 1

Distribution of Respondents

Early Grade Level	Number of Learners	Number of Teachers
Grade 1	13	2
Grade 2	12	2
Grade 3	13	2
Total	38	6

2.3 Research Instruments

The research study employed a researcher-created interview guide comprising open-ended questions. Open-ended questions enable participants to share their personal experiences and observations in a less restricted manner, providing greater insight into the rationale behind their responses.

The research was primarily interested in validating the interview guide for reliability and validity. Therefore, in conducting content and face validation of the interview guide, a panel of experienced educators (including a school principal and master teacher) reviewed the interview guide. The contributors' professional comments and suggestions were carefully considered so that the interviews improved the clarity, relevance, and appropriateness of the interview questions and could collect the information needed for the research study.

2.4. Statistical Treatment

Below is the statistical tool used to analyze and treat the problem of the study.

Thematic Analysis. The researcher used thematic analysis to analyze the data collected from the early graders and teachers' interviews. Thematic analysis is the process of determining the major themes that arose from the responses of participants and organizing them. While conducting thematic analysis, a word cloud application was used as an additional way to analyze the data. The word cloud application allows you to see and visually represent the most uttered words and concepts, creating a quick glance at the most prevalent ideas from the interviews.

To enhance the validity of the thematic analysis, the researcher performed a member-checking process. After conducting the one-on-one interviews and creating the first themes and sub-themes of the data, the researcher consulted selected participants to review the research conclusions. The researcher provided a transcription of their interview to selected participants, and relevant themes were sent prior to the meeting so they could reflect on the conclusions in the process "by the researcher."

The members' feedback was used to confirm whether the themes corresponded with their understanding of their experience. This contributed to the dependability and credibility of the analysis and ensured the researcher considered and articulated the participant's voices in the analysis.

3. RESULTS AND DISCUSSION

1. What are the initial experiences of teachers and learners on the National Learning Camp implementation in San Agustin Elementary School, Carmen District?

This statement of the problem presents the perceived empirical experiences and observations of teachers and learners regarding the actual implementation of the National Learning Camp during the 3-week implementation period in SAES, Carmen District.

Table 2 shows the initial experiences of teachers on the National Learning Camp implementation. As shown in Table 2 below, the initial experiences of teachers on the National Learning Camp implementation in SAES, Carmen District are Diverse Engagement and Classroom Management, Instructional Adaptation and Resource-Driven Challenges, Fostering Inclusion and Building Learner Relationships in a Diverse Camp Setting, Enhanced Assessment and Feedback Practices in the Camp Setting, and Learner Confidence and Teacher Motivation in the Camp Environment.

Table 2. Initial Experiences of Teachers on the National Learning Camp Implementation in San Agustin Elementary School, Carmen District

Theme	Sub-theme	Verbatim Responses
Diverse Engagement and Classroom Management	Increased Student Engagement through Interactive Activities	T-1: “"Students were excited about the hands-on activities that differed from traditional classroom lessons."
		T-6: "I noticed that students who usually don’t participate in class were more engaged in the camp setting."

		T-3: "Keeping students focused during longer activities was a challenge."
	Challenges in Sustaining Attention and Motivation	T-5: "Some learners struggled to maintain enthusiasm when activities became repetitive."
Instructional Adaptation and Resource-Driven Challenges	Resource Limitations	T-1: "I had to redesign some tasks because the resources we needed were unavailable."
		T-6: "The lack of enough materials required creative improvisation, which wasn't always effective."
		T-2: "It was effective in helping students understand concepts they struggled with during the regular school year."
		T-3: "The curriculum matched the aim of bridging learning gaps in core subject like Mathematics."
	Improvisation Instructional Adjustments to Meet Learner Needs	T-4: "I adapted my lessons to include more visual aids and interactive discussions."
		T-5: "Blending digital tools with physical activities was a new but rewarding experience."
Fostering Inclusion and Building Learner Relationships in a Diverse Camp Setting	Strengthening Teacher-Learner Relationships	T-2: "I could address individual needs more effectively, which strengthened my bond with the learners."
		T-3: "Students from diverse backgrounds had different expectations, which created challenges in keeping them united."
		T-4: "Some students were shy and needed encouragement to participate."
		T-6: "Students from various backgrounds had differing expectations, making it difficult to maintain unity among them."
	Managing Learner Diversity and Participation Challenges	
Enhanced Assessment and Feedback Practices in the Camp Setting	Use of Authentic and Observational Assessment Strategies	T-1: "Observation during group activities helped me evaluate student participation and skills. I move around the classroom during a group activity on sorting shapes, quietly noting which students were taking initiative and which ones needed encouragement."
		T-3: "I designed real-life problem-solving tasks as part of assessments- like planning a pretend shopping trip using play money. I was surprised by how students not only grasped the math concepts but also revealed their reasoning skills as they explained why they chose certain items within a budget. "
		T-4: "I provided immediate feedback during activities, which helped learners improve quickly. A struggling student beamed with pride after receiving a handwritten note on his worksheet saying, "I saw how hard you tried today—keep going!"
		T-6: "I personalized feedback for each student to address specific needs."
	Timely and Personalized Feedback to Support Learning	
Learner Confidence and Teacher Motivation in the Camp Environment	Growth in Learners' Self-Esteem and Leadership	T-1: "The interactive activities seemed to build learners' self-esteem gradually."
		T-2: "Learners showed more initiative in leading group activities than in regular classes."
		T-3: "Students celebrated small achievements, which boosted their confidence."
		T-4: "It was challenging to motivate unresponsive learners in a short period."
	Teacher Challenges in Motivation and Adaptation	T-6: "We worked on making everyone feel valued during the activities."
		T-5: "Adapting to the new teaching style added extra pressure."

Based on teachers' initial experiences of implementing the National Learning Camp at San Agustin Elementary School, Carmen District, it was a combination of positive gains and significant challenges. Many educators reported an apparent peak in learner engagement because many hands on and interactive activities allowed students to escape from the normal routine of the classroom. Students who were often quiet or withdrawn in regular classes were more likely to participate in the camp atmosphere; suggesting the motivational potential of experiential, play-based learning (Hattie & Clarke, 2020).

Still, it could be difficult to sustain this enthusiasm over time—especially after repeated activities, or prolonged activities—as this demonstrates the value of variation and pacing in lesson planning. Instructional delivery during the camp also shifted. Teachers found themselves modifying lessons to meet the different learning needs of their students and they certainly needed it with respect to the use of instructional materials. More often than not, they relied on improvised items which sometimes hindered the overall quality of teaching. In spite of these issues, teachers did make use of differentiated instruction strategies such as pictures and basic digital media to intervene in some basic gaps in foundational curriculum areas such as mathematics. These actions represent some best practices with differentiated instruction and illustrate teachers' ability to adapt (Tomlinson, 2019).

A primary strength of the camp was the cultivation of some of the more inclusive and supportive teacher-student relations. Educators expressed that they were able to establish closer connections with their learners especially in their attempts to address the individual needs of learners. Certainly, a challenge was managing a hub of learning that included a diverse group of learners with various behavioral issues. In quieter situations with reserved students, learning is likely going to require explicit attempts to enhance their confidence, as supported by a culturally responsive approach to teaching (Gay, 2020).

As part of the NLC, assessment moved from traditional models to more formative and authentic practice. Teachers used observation, real-world problem-solving and performance tasks with the students when measuring learning. Immediate and personalized feedback helped each student understand his or her achievement and helped students grow in their understanding. These assessments didn't just deepen students' understanding of their learning but also gave students motivation and ownership (Brookhart, 2022).

Teachers also noticed a sense of self-confidence developed in many students when they engaged in group work, especially when they were able to experience small moments of success. These moments raised both student moral and excitement in the classroom. However, there still remained a few students who did not engage as much, and the short period of the camp inhibited us from fully reaching them. Teachers also encountered pressures with the NLC teaching model and transitioning to a new learning style for their students. This indicates a need for better-structured support and professional development.

From the beginning roll-out of the National Learning Camp at SAES, Carmen District, it is evident that the emergent opportunity to consider new teaching models and develop new teacher-student relationships and student-centered learning is promising for students. At the same time, the roll-out highlighted a clear need to consider the challenges of scarce resources, the diversity of learners, and the support that teachers need to better realize future rollouts of the NLC.

Table 3 shows the initial experiences of learners on the National Learning Camp implementation in SAES, Carmen District. As shown in Table 3 below, the initial experiences of learners on the National Learning Camp implementation in SAES, Carmen District are Mixed Learner Experiences on Engagement, Collaboration, and Motivation, Learners' Experiences on Engagement, Instruction, and Resource Constraints, Positive Social Dynamics and Collaborative Learning, Learners' Perceptions of Feedback and Assessment, and Positive Social and Emotional Experiences

Table 3. Initial Experiences of Learners on the National Learning Camp Implementation in San Agustin Elementary School, Carmen District

Theme	Sub-theme	Verbatim Responses
Mixed Learner Experiences on Engagement, Collaboration, and Motivation	High Engagement through Novelty and Collaboration	L-1: "Ang paggamit og talagsaong mga materyales ug pagsulay og lain-laing kalihokan nakapahimo sa camp nga lingaw alang kanako." (Using unique materials and trying different activities made the camp really fun for me.)
		L-3: "Ang camp mura'g usa ka dako nga panimpalad, ug dili ko makahulat nga makakita unsay giandam matag-adlaw." (The camp felt like a big adventure, and I couldn't wait to see what was planned each day.)
		L-5: "Ganahan ko nga magtrabaho sa grupo kay mas nalingaw ko sa mga kalihokan." (I liked working in groups because it made the activities more enjoyable.)
		L-9: "Ang pagtinabangay sa akong mga kaklase nakapahimo kanako nga mas naapil ug mas masaligan sa akong kaugalingon." (Collaborating with my classmates helped me feel more involved and confident.)
		L-10: "Mas dali nga makaduol sa mga magtutudlo, busa mas sayon ang pag-apil ug pagpangutana." (The teachers were more approachable, which made it easier

		to participate and ask questions.)
		L-21: "Sa sinugdan, makaiikag siya, apan ang uban nga kalihokan nawad-an og kalingaw paglabay sa mga adlaw." (At first, it was interesting, but some activities became less exciting as the days went by.)
	Decreasing Motivation Due to Repetition and Task Difficulty	L-25: "Nawad-an ko og interes kung ang mga buluhaton nahimong sayon ra kaayo o balik-balik na." (I lost interest when the tasks became too easy or repetitive.)
		L-36:"Lisod magpabilin nga motivated kung taas kaayo o komplikado ang mga kalihokan." (It was hard to stay motivated during the longer or more complicated activities.)
Learners' Experiences on Engagement, Instruction, and Resource Constraints	Enjoyment and Relevance of Learning Activities	L-1: "Ganahan ko sa mga buluhaton kay nakatabang kini kanako sa paghinumdom sa among mga leksyon sa eskwelahan sa usa ka malingawong paagi." (I liked how the tasks helped me remember lessons from school in a fun way.)
		L-2: "Mura'g ang mga kalihokan gihimo gayud para sa among mas maayong pagkat-on." (The activities felt like they were made just for us to learn better.)
		L-6: "Ang uban nga kalihokan nakatabang sa mas sayon nga pagsabot sa mga sabjek sama sa math." (Some activities made it easier to understand subjects like math.)
		L-7: "Nalingaw ko sa mga leksyon nga nagtudlo kanamo unsaon pagsulbad sa mga problema sa tinuod nga kinabuhi." (I enjoyed the lessons that showed us how to solve real-life problems.)
		L-11: "Ang uban nga mga kalihokan nakatabang kanako sa pag-andam sa mga butang nga among tun-an sa umaabot sa eskwelahan." (Some of the activities helped me prepare for things we will learn later in school.)
		L-13: "Ang mga magtutudlo nagpatin-aw sa mga butang sa usa ka sayon nga pagsabot." (The teachers explained things in a way that was easy to follow.)
		L-15: "Ang bag-ong pamaagi sa pagtudlo nakatabang kanako nga masabtan ang mga butang mas maayo." (The new way of teaching helped me understand things better.)
		L-20: "Nalingaw ko sa mga grupong kalihokan kay ang magtutudlo naggiya kanamo nga walay diretsong paghatag og tubag." (I enjoyed the group activities because the teacher guided us without giving answers.)
		L-21: "Ang mga magtutudlo nagpa-sulbad kanamo og mga problema isip usa ka team, nga nalingaw ko." (The teachers asked us to solve problems as a team, which was fun.)
	Effective Teaching Methods and Teacher Support	L-26: "Kinahanglan namo maghulat sa mga materyales kay wala kini igo para sa tanan." (We had to wait for materials because there weren't enough for everyone.)
		L-28: "Ang uban nga mga kalihokan nawad-an og kalingaw kay kulang ang mga materyales aron kini mahimo sa husto nga paagi." (Some activities felt less fun because we didn't have the materials to do them right.)
		L-34: "Gibuhat sa mga magtutudlo ang ilang labing maayo, apan lisod ang uban nga butang kung walay hustong mga materyales." (The teachers did their best, but some things were hard without the right materials.)
		L-37: "Wala namo mahuman ang uban nga mga buluhaton kay nahurot ang mga materyales." (We couldn't finish some tasks because the materials ran out.)
		L-38: "Nindot ang mga kalihokan, apan dili igo ang mga materyales para sa tanan." (The activities were good, but the materials were not enough for

		everyone.)
	Challenges with Limited Learning Materials	
Positive Social Dynamics and Collaborative Learning	Supportive and Approachable Teacher-Student Relationships	L-3: "Ganahan ko nga nakigsulti kanamo ang magtutudlo sama sa usa ka higala." (I liked that the teacher talked to us like friends.)
		L-4: "Ang magtutudlo mura'g usa ka giya, dili lang usa ka magtutudlo nga naghatag og instruksyon." (The teacher was like a guide, not just someone giving instructions.)
		L-8: "Tungod sa suporta sa magtutudlo, nalingaw ko sa camp." (The teacher's support made me enjoy the camp.)
		L-12: "Usahay, maglalis ang akong mga kauban sa grupo kung giunsa paghimong sa mga kalihokan." (Sometimes, my groupmates argued about how to do activities.)
	Challenges and Teacher Guidance in Maintaining Focus and Cooperation	L-15: "Lisod magtrabaho kauban ang mga kaklase nga dili gusto makigtinabangay." (It was hard to work with classmates who didn't want to cooperate.)
		L-16: "Kinahanglan permi kami pahinumduman sa magtutudlo nga magpabilin nga naka-pokus." (The teacher had to remind us often to stay focused.)
		L-22: "Ganahan ko nga nagtinabangay ang tanan sa mga kalihokan." (I liked how everyone helped each other during activities.)
		L-24: "Gitudloan ko sa akong mga kaklase kung giunsa pagsulbad sa mga problema sa lahi nga paagi." (My classmates showed me how to solve problems in a different way.)
		L-25: "Mura'g kauban namo ang mga magtutudlo kaysa mga instruktor." (The teachers were more like our teammates than our instructors.)
	Peer Collaboration and Learning Support	L-27: "Nabati nako ang suporta sa akong mga kaklase kung ilang gitabangan ko sa lisod nga mga bahin." (I felt supported when my classmates helped me with difficult parts.)
		L-30: "Mas nasabtan nako ang mga leksyon kung nagtrabaho kami isip usa ka grupo." (I understood the lessons better when we worked in teams.)
		L-33: "Gitudloan ko sa akong mga kaklase sa mga butang nga wala pa nako nahibaw-an kaniadto." (My classmates taught me things I didn't know before.)
Learners' Perceptions of Feedback and Assessment	Enjoyable and Supportive Peer Feedback and Game-Based Assessment	L-9: "Nalingaw ko sa kalihokan nga base sa duwa kay usa kini ka bag-ong paagi sa pag-assess- sama sa "Math-relay game." (I enjoyed the game-based activity because it was a new way of being assessed- like "Math-relay-game.)
		L-18: "Ang tubag gikan sa mga kaklase nakatabang ug nakapahimo kanako nga mabati nga maayo." (Feedback from classmates was helpful and made me feel good.)
		L-14: "Giingnan ko sa magtutudlo kung unsay akong maayo ug unsay akong kinahanglan pa i-improve. Feeling nako naa siyay salig sa akoa." (The teacher told me what I did well and what I could improve. It made me feel like she believed in me.)
	Encouraging and Constructive	L-17: "Ang mga komentaryo sa magtutudlo nakamotivar kanako sa paghimo og

	Teacher Feedback	mas maayo." (The teacher's comments motivated me to do better.)
		L-23: "Ang pagdawat sa feedback nakapahimo kanako nga mabati nga ang magtutudlo nagatiman sa akong pagkat-on." (Getting feedback made me feel that the teacher cared about my learning.)
		L-29: "Gipasalamatan ko kung giunsa paghatag sa feedback nga positibo ug nagdasig." (I appreciated how the feedback was positive and encouraging.)
		L-31: "Mas maayo ang komento sa panahon sa mga kalihokan kaysa lang sa pagkuha og mga grado." (Feedback during activities was better than just getting grades.)
Positive Social and Emotional Experiences	Teacher Support and Encouragement	L-1: "Ganahan ko nga giingnan kami sa magtutudlo nga mosulay bisan pa og magkamali kami." (I liked that the teacher encouraged us to try, even if we made mistakes.)
		L-7: "Nahimong dili na ko kaulaw tungod kay ang magtutudlo pirmi nagasuporta kanako." (I became less shy because the teacher always supported me.")
		L-11: "Sa akong tan-aw, nagpaningkamot ang magtutudlo aron himoong lingaw ang tanan para namo." (I think the teacher worked hard to make everything fun for us.)
		L-5: "Malipay ko kung ang akong grupo mag-cheer para kanako sa mga buluhaton." (I was happy when my group cheered for me during the tasks.")
		L-10: "Nalingaw ko sa grupong trabaho kay gipasalamatan ang akong mga ideya." (I enjoyed the group work because my ideas were appreciated.)
		L-19: "Nabati nako nga apil ko sa akong grupo." (I felt like I belonged in my group.")
	Supportive Group Dynamics and Inclusion	L-32: "Ganahan ko nga walay bisan kinsa nga napildi o na-bypass sa mga duwa." (I liked that no one was left out during the games.)
		L-35: "Ang mga grupong buluhaton nakapahimo kanako nga mabati nga importante ug apil." (The group tasks made me feel important and included.)

Learners' initial experiences while participating in the National Learning Camp identified at San Agustin Elementary School in Carmen District exhibited both enthusiasm and some difficulties. Many learners were extremely engaged during most of the camp, especially at the beginning. The campers appreciated the new materials, hands-on activities and collaborative work with classmates. The students (L-1 and L-3) felt the camp was fun and like an adventure because the materials were novel and there seemed to be something new to discover each day or time they met. Kolb's Experiential Learning Theory, which values real experience to provide motivation to engage students, was consistent with this. In this instance, working as a group seemed to be relevant because L-5 and L-9 both stated it was more fun and that working with someone else helped them with their confidence and participation. This supports Vygotsky's Social Development Theory and the findings of Crespo et al. (2020), who found that learning together with peers is an important part of children's cognitive development.

However, the initial elation did not remain for all learners, such as L-21 and L-25, who remarked that some activities became predictable and ultimately easy and, therefore, less motivating. L-36 indicated that tasks that were lengthy, or overly complicated made it challenging to stay engaged. Ryan and Deci's Self-Determination Theory (2020) proposes that students need to feel both competent and engaged in order to be motivated, and if the task is way too easy or way too difficult, motivation could be disengaged. Overall, learners provided mostly positive feedback regarding instruction.

Generally, learners found that the activities assisted their memory and use of the material learned in school. For example, L-2 and L-6 remarked that lessons connected well to the assignments or subjects they were studying in school and made difficult topics, such as math, easier to tackle. L-7 and L-11 noted that the activities were connected to real-life problems. This concept matched Bautista et al.'s (2021) premise that learning occurs stronger when connected to everyday situations. Also, learners appreciated the style of teaching, and L-13 and L-15 said the teachers were more like "guides" that helped participants to discover things, than evoking a lecturing style. This is consistent with Schunk's (2020) constructivist learning, which presumed students learn better via guided discovery.

Although positive, a few learners pointed out some logistical issues; in most cases, this was tied to the absence of adequate materials. L-26, L-34, and L-37 shared that not everyone was able to fully participate at all times, as there were not enough materials. These factors were substantiated by the results from David et al. (2022), who reported that not even "the best learning programs work well if they do not have the support required". Teachers

tried their best, but on some occasions, activities were changed or skipped due to a lack of materials. The social environment was predominantly positive at camp. The students appreciated that the teachers were approachable.

For instance, L-3 and L-4 indicated that the teachers treated them more like teammates. They received helpful responses to their questions in an open way, and felt more comfortable in their environment. Nevertheless, there were a few challenges, such as keeping groups focused and working together. A few learners, such as L-12 and L-15, mentioned some disagreements or some students being uncooperative, which meant the teachers needed to intervene frequently, as noted by L-16. Overall, however, students were very well collaborated. A number of students, including L-22 and L-30, commented that the support from their peers helped them to understand the lessons in a better way, whereas L-33 noted that his friends helped him learn new ideas - this is really an example of peer tutoring, a co-educator phenomenon, which Tamayo and Nuñez (2021), found to be an effective tool in helping elementary students learn.

The learners were also favorable toward the methods of delivering feedback and assessment in the camp. They enjoyed each other's feedback, and the game-based assessments were entertaining. L-9 spoke of a "Math-relay game" that made assessment fun and effective, which coincides with Ramos and Sy's (2020) study to note how games minimize testing anxiety and promote positive outcomes. The teacher's feedback was also encouraging and useful—L-14 and L-17 commented on how the feedback noted strengths and areas to improve their confidence and motivation. This also supports Mercado's (2023) thinking about formative feedback as an influence on learner engagement.

Lastly, many learners shared the positive and lasting effects of the camp on the emotional and social environment. The learners described how teacher encouragement and the inclusive group setting contributed to their comfort and feeling included, with L-1, L-5, and L-19 declaring feelings of confidence. The role of emotional safety and a sense of belonging is, therefore, critical to developing effective learning spaces, as noted by Santos et al. (2023), especially in programs like the NLC, designed to support continuous learners who experienced interruptions associated with the pandemic. Overall, participants' initial experiences with the National Learning Camp indicated that it was a success in improving engagement, cooperation, and worthwhile learning.

However, if the National Learning Camp is to establish a longer-lasting impact, there are considerable issues to be addressed, including repetition of activities, levels of challenge, and lack of resources. Nonetheless, the combination of emotional support by teachers, new teaching methods, and positive social experiences indicates that the NLC has considerable potential to support learning in a fun and inclusive manner.

2. What are the initial gains of learners in the implementation of National Learning Camp on Mathematics skills in number identification, number discrimination, the four fundamental operations, basic geometry, and measurement in San Agustin Elementary School, Carmen District?

Data presented in this problem are the initials gains of the early graders in the Mathematics subject assessing on its effective of the learning camp program.Table 4 presents the pretest and post-test results from the Rapid Mathematics Assessment across three learning camps: Intervention, Consolidation, and Enhancement in San Agustin Elementary School, Carmen District.

Table 4. Pretest and Post test Result in Rapid Mathematics Assessment (RMA)

School	Pretest			Post Test		
	Intervention Camp	Consolidation Camp	Enhancement Camp	Intervention Camp	Consolidation Camp	Enhancement Camp
San Agustin E/S	23	5	10	5	7	26
Total	23 (61%)	5 (13%)	10 (26%)	5 (13%)	7 (19%)	26 (68%)

Table 4 shows an insight into the improvement of the learners from the pretest and post-test in the Rapid Mathematics Assessment during the National Learning Camp at San Agustin Elementary School, Carmen District.

At the beginning of the camp, many students, 23 learners (61%) were in the Intervention Camp, meaning they had learning gaps in Mathematics. Next, only five students (13%) were recorded to be in the Consolidation Camp and 10 learners (26%) in the Enhancement Camp, indicating that only a few of them had near proficiency or advanced mathematical skills before the start of the camp.

At the end of the camp, the post-test assessment showed clear increases and promising improvements. The learners in the Enhancement Camp, increased from 10 to 26 learners (68%), indicating an upward trajectory for the math skills of these learners. On the other hand, those in the Intervention camp decreased from 23 to only five learners (13%), which illustrated a decrease in almost all the students requiring intensive support. The Consolidation Camp only saw a slight increase, which at the end of the camp had seven learners (19%).

These findings indicate that the efficacy of the National Learning Camp in improving the early graders' mathematics competency is real. The move from lower to higher levels of proficiency is a clear example of how the camp's pedagogical strategies, applications, and valuable learning support assisted learners to progress. There is a clear demonstration that targeted pedagogy in NLC made a difference, especially since many students moved from needing extra support in mathematics to displaying mastery of advanced skills.

Overall, the initial gains in Mathematics highlight that learners can develop and significantly progress with well-timed intervention and support, moving from needing extra support to displaying familiarity and mastery of key mathematics concepts.

3. What are the facilitating factors of the teachers and learners in the implementation of the National Learning Camp in San Agustin Elementary School, Carmen District?

Responses on the facilitating factors in the implementation of the National Learning Camp program of the Department of Education are laid based from the actual experiences and observations of the teachers and learners.

Table 5 shows the facilitating factors of the teachers in the implementation of the National Learning Camp in SAES, Carmen District. As shown in Table 5, the facilitating factors of the teachers in the implementation of the National Learning Camp in SAES, Carmen District are Development of Collaboration and Peer Support Among Learners, Promoting Learner Autonomy and Critical Thinking, Differentiated and Culturally Responsive Math Instruction, Professional Collaboration and Growth, and Responsive Teaching Practices and Assessment Strategies.

Table 5. Facilitating Factors of the Teachers in the Implementation of the National Learning Camp in San Agustin Elementary School, Carmen District

Theme	Sub-theme	Verbatim Responses
Development of Collaboration and Peer Support Among Learners	Growth in Teamwork and Cooperative Learning	T-1: "I noticed that students started working together more smoothly as they learned to share ideas and help each other."
		T-2: "As they learned how to collaborate and think collectively during activities, they improved in problem-solving."
		T-4: "I observed that students began assuming roles that played to their strengths during group activities, which resulted in more productive collaboration."
		T-5: "I observed how kids were able to express their ideas and come to group conclusions through group discussions."
	Emergence of Peer Mentoring and Leadership	T-3: "I encouraged the older students to help the younger ones, and it was wonderful to see how the learners took on the role of mentors."
		T-6: "The learners showed natural leadership by quickly adjusting to team roles and even stepping up to help guide the group."
Promoting Learner Autonomy and Critical Thinking	Encouragement of Critical and Reflective Thinking	T-2: "To get my students to reflect carefully on the assignments they were given, I employed questioning strategies.
		T-3: "We focused on solving real-life problems, which pushed students to analyze and evaluate different solutions, boosting their critical thinking skills."
		T-4: "I observed my students' increased engagement in critical thinking about their work when I gave them open-ended tasks."
	Fostering Learner Responsibility and Goal-Setting	T-5: "I urged my students to reflect on their accomplishments and areas for improvement after each task."
		T-6: "Allowing the learners to set personal goals and reflect on their learning journey helped them develop a sense of responsibility."
Differentiated and Culturally Responsive Math Instruction	Differentiation Based on Learner Needs and Abilities	T-1: "I provide different types of math problems, such as visual aids for visual learners and hands-on activities for kinesthetic learners, to ensure all students are able to engage with the content."
		T-2: "I adjust the difficulty of math tasks based on individual progress. Some students work on addition while others challenge themselves with multiplication."
		T-3: "In order to promote peer learning, I give students who require additional math support easier problems with more visual cues and group work opportunities."
		T-4: "We make abstract math concepts more tangible and engaging for the children by using physical manipulatives like counting cubes and number lines."
	Use of Culturally Relevant Contexts in Teaching	T-5: "I incorporate culturally relevant examples into math problems, such as using local currency for money-related activities or items students are familiar with, like local food items in word problems."
		T-6: "I use culturally familiar objects, like local fruits or animals, in word problems to make math feel more accessible and connected to students' lives."
Professional Collaboration	Collaborative Learning and	T-1: "I take part in collaborative learning groups where we discuss new strategies and share resources to teach math concepts better."

and Growth	Peer Sharing	T-2: "Collaborative sessions during the NLC brought together Mathematics teachers to share best practices, which gave me new ideas for making abstract topics more accessible. I recounted how a simple idea I had for teaching number bonds was greatly improved after a casual chat with a colleague who suggested turning it into a storytelling activity."
	Mentoring and Coaching for Inclusive and Effective Math Instruction	T-3: "The camp offered collaborative mentoring, where coaches shared practical tips on managing classroom dynamics during group math activities." T-4: "Mentoring sessions during the camp focused on integrating cooperative learning techniques into my math lessons, which helped students learn through collaboration." T-5: "Coaching sessions have allowed me to improve how I differentiate math instruction for students with different learning styles, making sure everyone can understand the concepts."
	Adaptive Instruction and Use of Local Resource	T-6: "By offering training on how to address the diverse learning needs of students, including those who struggle with foundational math skills, the NLC emphasized equity in education."
Responsive Teaching Practices and Assessment Strategies	Assessment-Driven Instruction and Monitoring	T-1: "At the beginning of each module, regular diagnostic assessments helped identify gaps in foundational skills and allowed me to adjust my math lessons accordingly." T-2: "Students were able to critically assess one another's work through the introduction of peer review exercises during the camp, which encouraged responsibility and comprehension." T-5: "Using locally available tools, like sticks and pebbles, for math exercises helped bridge resource gaps and aligned with the curriculum's adaptability goals." T-6: "The camp encouraged creativity in teaching methods, allowing me to modify my approach for students with varying learning preferences, such as visual or kinesthetic." T-3: "The structured feedback sessions allowed me to regularly check in with students, discuss their progress, and set actionable goals. I adapted math lessons to students' interests by using game-based and manipulative activities, making the content more engaging and relatable." T-4: "The alignment of monitoring tools with the curriculum ensured consistency in evaluating core competencies across all math topics. I tailored my teaching strategies to the available resources in our school, such as using recycled materials."

The National Learning Camp at San Agustin Elementary School, Carmen District revealed a number of factors that contributed to improved teaching and learning - especially in mathematics. One of the more significant changes was exhibited in students' increased cooperation and choices in working together. Teachers observed students in productive collaboration at the learner's level, engaging in opportunities for teamwork, peer learning, learning in groups, and meaningful collaboration. Students stepped up to take responsibility for their own learning and that of others in their communities. This corresponds to Vygotsky's Social Development Theory, which relates to personal learning taking place through students' level of social interaction and cognitive development (Schunk, 2020). Research suggests that working together will contribute to students' collective development of problem-solving skills and communication skills (Salas et al., 2020).

Another important aspect was the capacity of the camp to promote learner autonomy and critical thinking. Teachers effectively stimulated the students to set their own goals, reflect upon what they learned, and critically consider their understanding of real-world problems through various purposeful questions. These findings align with Tan and Teo (2021), who explain that student-centered, reflective teaching increases learners' motivation by developing critical thinking. These findings also align to Deci and Ryan's Self-Determination Theory, which identifies that learners need to feel autonomous to sustain intrinsic motivation when learning (Ryan & Deci, 2020).

The camp provided teachers with the opportunity to implement differentiated and culturally relevant mathematics lessons. They modified activities based on the students' varying capacities and used familiar contexts of local fruits or currency to demonstrate that maths can be applicable and relevant. This links back to Tomlinson's (2019) work on differentiation and Gay's (2020) message of culturally responsive teaching to support student participation and motivation through relevant or meaningful connections to their own worlds to create accessibility for learning.

The Professional growth aspect was another appealing bonus. The NLC encouraged teachers to enhance their professional development through collaboration, mentorship, and the discovery of others who employ successful strategies and practices. The networking aspect mirrors Lomos et al.'s (2022) conclusions that have indicated professional learning communities that are ongoing can improve teachers' teaching ability and student

performance. Based on how often the teachers expressed how much they enjoyed being able to reflect, collaborate, and learn from each other helped augment their practice.

Finally, the aspect of using flexible pedagogies and formative assessment was fundamental. Teachers consistently tracked students' learning progress and adjusted their lessons based on the findings, often utilizing community-specific learning supports. The use of assessments in this way is consistent Black and Wiliam (2019), since assessments provided instructional direction and timely feedback in their target identification, thereby supporting each learner's growth while retaining focus on the learner's needs.

In conclusion, the National Learning Camp ignited positive shifts in teachers' pedagogical practices, demonstrated equity in instruction, and fostered a collaborative, rich, and thoughtful learning environment. The study's themes were closely aligned with recent educational research, emphasizing the NLC'S undeniable value to transform the manner in which foundational education is delivered.

Table 6 shows the facilitating factors of the learners in the implementation of the National Learning Camp in San Agustin Elementary School, Carmen District. As shown in Table 6, the facilitating factors of the learners in the implementation of the National Learning Camp in San Agustin Elementary School, Carmen District are Collaborative Learning as a Key Factor in Learner Engagement and Growth, Development of Reflective and Critical Thinking Skills Among Learners, and Use of Differentiated and Culturally Relevant Strategies in Learning Math.

Table 6. Facilitating Factors of the Learners in the Implementation of the National Learning Camp in San Agustin Elementary School, Carmen District

Theme	Sub-theme	Verbatim Responses
Collaborative Learning as a Key Factor in Learner Engagement and Growth	Positive Peer Support and Mutual Assistance	L-2: "Gitabangan nako ang akong higala kung wala niya nasabtan ang buluhaton." (I helped my friend when she didn't understand the task.)
		L-4: "Nakat-on ko gikan sa akong higala samtang naghimo mi sa math puzzle." (I learned from my friend when we did the math puzzle together.)
		L-8: "Ganahan ko nga motabang sa akong higala sa pagdugang og mga numero." (I like helping my friend adding numbers.)
		L-9: "Nalipay ko nga gitabangan ko sa akong higala kung giunsa pagsulbad sa problema sa math." (It was nice when my friend helped me how to solve math problem.)
		L-36: "Nagtinabangay kami sa pagsulbad sa problema sa math, ug malingaw ko paghuman namo!" (We worked together to solve math problem, and it felt great when we finished!)
		L-1: "Nagtinabangay kami sa among buluhaton ug nagdula usab, lingaw kaayo!" (We helped each other with our work and played together, it was fun!)
		L-6: "Sayun ra namo nahuman ang mga buluhaton kay nagtinabangay kami tanan." (It was easy to finish tasks because we all worked on it together.)
		L-28: "Kung nagtrabaho kami isip grupo, nagbuhat kaming tanan sa among parte ug dali namo nahuman." (When we worked in a group, we all did our part and finished quickly.)
		L-34: "Ganahan ko nga nagtinabangay ang tanan aron masulbad ang mga problema." (I liked when everyone helped each other to solve problems.)
	Enjoyment and Efficiency Through Group Collaboration	L-37: "Sa sinugdan, wala ko kasiguro kung ganahan ko magtrabaho uban sa uban, pero nalingaw ko paghuman namo!" (At first, I wasn't sure about working with others, but it was fun when we did!)
Development of Reflective and Critical Thinking Skills Among Learners	Growth Through Self-Reflection and Effort to Improve	L-3: "Nagahunahuna ko kung unsay akong nabuhat nga husto ug unsay akong mahimo nga mas maayo sunod." (I think about what I did right and what I can do better next time.)
		L-5: "Malipay ko kung mahuman nako ang akong buluhaton, apan nahibalo usab ko nga mahimo pa nako kini mas maayo sunod." (I feel happy when I finish my work, but I also know I can do better next time.)
		L-10: "Nakapabati nako og garbo kung mahuman nako ang akong buluhaton, ug maningkamot ko nga mas maayo ang sunod." (I feel proud when I finish my

		task, and I try to do the next one better.)
	Development of Critical Thinking and Problem-Solving Strategies	L-15: "Nagahunahuna ko kung giunsa nako mapauswag kung makasayop ko." (I think about how I can improve when I make mistakes.)
		L-18: "Maningkamot ko nga mas maayo kung dili ko makabuhat og tarong sa unang higayon." (I try to do better when I can't do something right the first time.)
		L-20: "Nagahunahuna ko kung unsay akong buhaton sa lain-laing kahimtang sa dili pa ko motubag og pangutana." (I think about what I would do in different situations before I answer a question.)
		L-25: "Nakat-on ko nga usahay wala'y usa ra ka tubag, ug mahimo ko maghunahuna og daghang paagi aron masulbad ang usa ka problema." (I learned that sometimes there isn't just one answer, and I can think of many ways to solve a problem.)
		L-30: "Nakat-on ko nga makapangita og daghang paagi sa pagsulbad sa mga problema sa math." (I learned to find more than one way to do math problems.)
Use of Differentiated and Culturally Relevant Strategies in Learning Math	Differentiated Support to Match Learner Needs	L-4: "Ang magtutudlo nagtabang kanako sa sayon nga math una, unya maningkamot ko sa mas lisod nga mga problema." (The teacher helps me with simple math first, and then I try harder problems.)
		L-7: "Usahay makadawat ko og worksheet nga may mas sayon nga mga numero samtang ang uban nagtrabaho sa mas lisod nga mga buluhaton." (Sometimes I get a worksheet with simpler numbers to work on while the others do harder ones.)
		L-12: "Gipakita sa magtutudlo kanako ang usa ka dula sa math aron magpraktis ko og dugang." (The teacher shows me a math game to play when I need more practice.)
		L-17: "Ganahan ko mag-sulbad og mga problema gamit ang counting blocks kay mas sayon makita ang mga tubag." (I like solving problems with the counting blocks, it makes it easier to see the answers.)
	Use of Local and Familiar Contexts to Enhance Math Learning	L-21: "Ang kanta sa math nakatabang kanako nga mahinumduman ang mga numero ug kung unsaon kini paggamit." (The math song helps me remember the numbers and what to do with them.")
		L-24: "Gigamit namo ang among lokal nga pagkaon sa pag-ihap sa klase sa math, sama sa pila ka mangga ang naa namo." (We used our local food to count in math class, like how many mangoes we have.)
		L-29: "Nagpraktis mi sa pag-ihap gamit ang kwarta nga gigamit sa akong pamilya, ug makatabang kini." (We practiced counting with the money my family uses, and that was helpful.)
		L-35: "Gipakita sa among klase ang mga hulagway sa mga hayop sa among nasud aron ipraktis ang pagdugang." (We used pictures of our country's animals to practice addition.)
		L-38: "Lingaw para kanako ang pag-ihap kung pila kami sa among pamilya sa among klase sa math." (I think it's fun to count how many people are in my family when we do math.)

The National Learning Camp in SAES, Carmen District, established a learning environment where collaboration was a major factor in encouraging engagement and growing students' abilities. Many of the students emerged, sharing the sentiment that working with their peers made their assigned task not just easier but more enjoyable. They shared their experiences of supporting each other, learning at the same time through group work, and facilitating each other's motivation through the enjoyment of shared success in collaborative problem-solving. The collaborative notion of sharing success aligns with Johnson and Johnson's (2020) idea of cooperation, where positive gains are observed together, giving rise to cooperation being

directly proportional to one's connections with others during collaborative learning experiences, which promote academic achievement and facilitating social skill development through teamwork.

Students also showed notable improvement in their capacity for critical thought, self-control, and learning reflection. They frequently expressed thoughts about how they were learning and inquired about how they can learn differently. This kind of metacognitive development suggested the existence of Flavell's metacognition and the importance of metacognition with regard to self-organized learning in young learners (Zimmerman & Schunk, 2021). This implied better self-regulated learning. They knew making mistakes was part of the learning experience yet were working hard on enhancing their problem-solving skills and demonstrated improvement in their overall focus and determination (Dignath & Büttner, 2019).

Differentiated learning and culturally relevant pedagogies also made a difference for students. Most students appreciated their teacher's willingness to modify their lesson for students' needs—to make it easier, to provide more games and practice for students needing more of a challenge, to use examples that were familiar to students (e.g., to count all available fruits in the community or use family money for examples). Using examples where students could make connections to their lived experiences in math lessons encouraged students to consider meaning in math and concepts that may have been less convincing otherwise. Ladson-Billings (2021), in the culturally sustaining teaching framework, encouraged educators to connect bridging meanings to what students do on a daily basis and use those connections to enhance their understandings, build agency, and improve motivation. Gay's (2020) research identifies this as a way to increase student engagement, improve learning, and help to develop conceptual understanding in diverse classrooms.

The National Learning Camp's cultural relevance, peer collaboration, and reflective thinking foster academic progress and improvement in students' perceptions of math and positive attitudes towards math.

4. What are the hindering factors of teachers and learners in the implementation of the National Learning Camp in San Agustin Elementary School, Carmen District?

The implementation of National Learning Camp in SAES, Carmen District, often encounters challenges that may affect their effectiveness and sustainability. Understanding these challenges is crucial in refining future interventions and ensuring successful outcomes.

Table 7 shows the hindering factors of teachers in the implementation of the National Learning Camp in SAES, Carmen District. As shown in Table 7, the hindering factors of teachers in the implementation of the National Learning Camp in SAES, Carmen District are Insufficient Learning Resources and Technology for Effective Math Instruction, Challenges in Managing Classroom Behavior and Resource Limitations Affecting Math Instruction, Challenges in Parental Support Affecting Students' Math Learning, and Learners' Diverse Challenges in Math Learning.

Table 7. Hindering Factors of the Teachers in the Implementation of the National Learning Camp in San Agustin Elementary School, Carmen District

Theme	Sub-theme	Verbatim Responses
Insufficient Learning Resources and Technology for Effective Math Instruction	Limited Access to Interactive Technology and Digital Tools	T-1: "We need more tech tools like projectors or smart boards, which would allow me to demonstrate math problems interactively. Without them, students miss out on interactive visual lessons."
		T-4: "Honestly, a bunch of my students just can't keep up with math because they don't have laptops or tablets at home. So, forget about those fancy online platforms—no tech, no practice. Kinda feels like we're stuck in the stone age."
		T-5: "I'm still stuck teaching math like it's 1995, all because we barely have any tech in class. No interactive whiteboards, just old-school chalk and talk. It's like trying to stream Netflix on dial-up—painful."
		T-6: "Trying to use online resources in my lessons? Yeah, right. I don't even have reliable Wi-Fi. I'd love to jazz things up with interactive math stuff, but I'm basically offline, so it's a struggle."
	Shortage of Physical Learning Materials	T-2: "The lack of math workbooks for each student made it challenging to ensure that all learners were practicing at the same time."
		T-3: "We had a shortage of visual aids such as charts and number posters, which are essential for teaching early-grade students fundamental math concepts like addition and subtraction."
		T-1: "Some students are frequently disruptive in math class, making it

		difficult to maintain focus and progress. This affects the whole class's learning environment."
Challenges in Managing Classroom Behavior and Resource Limitations Affecting Math Instruction	Student Disruptions Impacting Learning Environment	T-3: "Certain students tend to act out when they find math challenging. It can be tough to redirect their attention back to the lesson."
		T-4: "It's difficult to focus on teaching math when some students disrupt the class by misbehaving or not staying on task."
		T-5: "I know that interactive methods can improve student engagement, but there isn't enough time or enough resources to fully implement them in my math classes."
		T-6: I'd kill to bring in more interactive math stuff—games, apps, all that jazz. But let's be real, our school's budget is a joke. Can't buy what we can't afford.
	Limited Resources Restricting Implementation of Interactive Math Methods	T-1: A lot of parents out here are just swamped. Work's got them running ragged, so sitting down for math homework? Yes, not always happening.
		T-2: Even the parents who wanna help… half the time they're just wiped out from pulling double shifts or juggling twenty things. Who can blame them?
Challenges in Parental Support Affecting Students' Math Learning	Parents' Limited Time and Availability	T-3: If kids aren't getting that math boost at home, they start falling behind. It's not rocket science. You need backup outside the classroom, or the lessons just don't stick.
		T-4: Honestly, I see some kids bombing math tests simply because mom and dad can't play tutor at home. Not their fault, but the struggle is real.
		T-5: Sometimes parents just don't get why daily math practice matters. So the kids aren't getting that steady push at home, and yeah, it shows.
		T-6: Some parents have no clue where to even start with supporting their kid's math. It's not like there's a manual handed out at the door. They don't always understand the challenges their child faces in learning math."
		T-1: "Keeping young learners engaged in math is a challenge because they have such short attention spans."
	Lack of Parental Awareness and Understanding	T-2: "During math activities, students often lose concentration midway, especially if the task is challenging."
		T-4: "Some students grasp math concepts quickly, while others struggle, which creates a wide gap in understanding."
		T-5: "Students have varying levels of math readiness, which makes it difficult to teach the entire class effectively."
Learners' Diverse Challenges in Math Learning	Difficulty in Maintaining Student Engagement and Concentration	T-6: "Differentiating instruction is difficult when some students are far ahead, and others are struggling with foundational skills."
	Varied Levels of Math Readiness Among Students	

Teachers in the National Learning Camp at SAES, Carmen District faced a major challenge when trying to teach math. Unfortunately, one of the biggest barriers was an absence of adequate learning materials and technology. Many of the educators relayed they did not have sufficient interactive materials such as projectors, smart boards and/or tablets to create opportunities for more interactive and visual lessons. Each teacher stated there were several times when they had to engage the students with online materials, but the lack of reliable internet kept them from enhancing the learning experience with useful online resources and/or digital learning platforms that could have supported their students' learning experiences. Another

challenge was that there were also very few math learning materials, such as books, actual objects for visualizing and understanding math conceptually, and even resolving a lack of mathematics manipulative materials limited teachers' abilities to provide varied and hands-on learning experiences for students. Several of these findings coincide with worldwide findings that have indicated that materials are a major barrier to quality improvement of education systems (UNESCO, 2021; Darling-Hammond et al., 2022).

Another challenge with classroom management. A lot of teachers had a difficult time keeping kids focused and on task when lessons became harder or when kids were restless. Because time and resources were finite, it was difficult to use other interactive methods of learning or teaching that may have kept kids more engaged. These challenges align with other research supporting positive environment being the best practice for effective learning and teaching (Emmer & Evertson, 2019).

Parental support was another barrier. Many parents had busy jobs and were less likely to provide support to their child on math practice at home. Additionally, some parents were unaware (and this contributed to the gaps in reinforcement) that there was significance in ongoing learning support and consistent practice outside of school. This aligns with existing research on the importance of family involvement with student success, and the obstacles faced when that is absent during early education (Epstein, 2020; Hoover-Dempsey et al, 2021).

Finally, teachers were challenged to respond to the diversity in their class. Learners arrived at the camp with different levels of readiness in mathematics, and given the short attention spans of students, the variability, each classroom teacher had challenges in preparing materials so that all students were focused and making progress. Variability in student performance and ability is not unique to this program, and recent research has highlighted the need for flexible and purposeful pedagogy in an attempt to meet the individual needs of students must be considered and is not the responsibility of the individual teacher to solve (Tomlinson, 2019; Hattie & Clarke, 2020).

The challenges discussed in this report point to several focus areas in which improvement can be made, and support for teachers can be provided to enhance successful programs like the National Learning Camp. The recognition of these specific challenges can help schools, and other stakeholders, produce focus areas with targeted remedies that met and responded to the needs of teachers and learners, producing a more inclusive, effective and engaging learning experience overall.

Table 8 shows the hindering factors of learners in the implementation of the National Learning Camp in SAES, Carmen District. As shown in Table 8, the hindering factors of learners in the implementation of the National Learning Camp in SAES, Carmen District are Limited Access to Learning Materials and Technology, Barriers to an Engaging and Focused Math Learning Environment, Limited Parental Support in Math Learning at Home, and Learners' Struggles with Sustained Focus and Motivation in Math Class.

Table 8. Hindering Factors of the Learners in the Implementation of the National Learning Camp in San Agustin Elementary School, Carmen District

Theme	Sub-theme	Verbatim Responses
Limited Access to Learning Materials and Technology	Need for More Physical Learning Materials	L-1: "Sa akong tan-aw, mas sayon ang pagkat-on sa math kung aduna pa kami'y daghang gamit sama sa calculator o tsart sa klase." (I think it would be easier to learn math if we had more materials like calculators or charts in class.)
		L-3: "Sa akong hunahuna, mas masabtan nako ang math kung naa koy kaugalingong gamit alang sa praktis, sama sa number lines ug mga porma." (I think I would understand math better if I had my own materials to use for practice, like number lines and shapes.)
	Insufficient Technological Devices in Class	L-10: "Dili permi namo magamit ang math app sa klase kay dili igo ang mga tablet para sa tanan." (We don't always get to use the math app in class because there aren't enough tablets for everyone to use.)
		L-17: "Gusto ko nga makat-on sa math pinaagi sa lingaw nga mga dula sa computer, pero kulang ang mga computer sa eskwelahan para sa tanan." (I want to learn math through fun games on the computer, but the school doesn't have enough computers for everyone.)
		L-28: "Gusto unta nako nga makagamit pa kami og daghang dula sa math sa computer, pero kulang ang mga gamit sa klase." (I wish we could use more math games on the computer, but we don't have enough devices in class to play them.)
		L-4: "Usahay, dili namo mapanlantaw ang mga video sa math nga ipakita sa magtutudlo tungod kay hinay ang internet sa klase." (Sometimes we can't watch the math videos the teacher shows because the internet in

		class is too slow.)
	Poor Internet Connectivity and Home Access Barriers	L-21: "Lisod para kanako ang pagsubay sa online nga mga leksyon kay kulang ang mga computer sa among klase." (It's hard for me to follow along with online lessons because we don't have a few computers in class.)
		L-22: "Wala koy access sa laptop o cellphone sa balay, mao nga dili ko makapraktis sa math kung maghatag ang magtutudlo og online nga buluhaton." (I don't have access to a laptop or phone at home, so I can't do extra math practice when the teacher gives us online assignments.)
		L-34: Hinay ang koneksyon sa internet sa klase, mao nga dili ko makatan-aw og mga video nga makatabang sa akong pagkat-on sa math." (The internet connection in class is bad, so I can't watch the videos the teacher plays to help us learn math better.)
Barriers to an Engaging and Focused Math Learning Environment	Limited Use of Play-Based and Hands-On Activities	L-2: "Ganahan ko magbuhat og math kung magdula mi, pero dili namo kini buhaton matag-adlaw." (I enjoy doing math when we play games, but we don't do that every day.)
		L-3: "Mas ganahan ko sa math kung mogamit mi og mga dulaan ug dula sa pagkat-on, pero dili kini permi buhaton." (I like math more when we use toys and games to learn, but we don't do it very often.)
		L-6: "Dili mi makabuhat og igong lingaw nga mga butang sa klase sa math, sama sa paggamit og mga bloke o mga drawing." (We don't do enough fun things in math class, like using blocks or drawings.)
		L-13: "Ganahan ko kung mogamit mi og mga dula sa pagkat-on sa math kay mas makalingaw kini." (I like when we use games to learn math because it makes it more exciting.)
	Preference for Active Learning Methods	L-18: "Gusto ko nga makabuhat og daghang hands-on nga mga kalihokan sa math, sama sa paggamit og manipulatives aron masulbad ang mga problema." (I wish we could do more hands-on math activities, like using manipulatives to solve problems.)
		L-20: "Usahay, daghan kaayo ang istorya sa uban nga mga bata, ug dili nako madungog ang gisulti sa magtutudlo bahin sa math." (Sometimes the other kids talk too much, and I can't hear what the teacher is saying about math.)
	Disruptive Classroom Environment	L-27: "Kung saba ang uban nga estudyante, lisod para nako nga makatutok sa akong buluhaton sa math." (When other students make noise, it's hard for me to concentrate on my math work.)
		L-29: "Ang kasaba sa uban nga estudyante nakapalisod sa klase sa math kay dili ko makapokus sa magtutudlo." (The noise from some students makes math class harder for me because I can't focus on the teacher.)
		L-36: "Kung saba ang klase, madisturbo ko ug makalimot sa pagsulbad sa mga problema sa math." (When the class is noisy, I get distracted and forget how to solve the math problems.)
Limited Parental Support in Math Learning at Home	Parents' Lack of Time Due to Work	L-5: "Pirmi busy akong mama sa trabaho, mao nga wala siyay oras motabang nako sa math." (My mom is always busy with work, so she doesn't have time to help me with math.)
		L-9: "Dili pirmi makatabang akong ginikanan nako sa math kay sige sila'g trabaho." (My parents don't always help me with math because they have to work a lot.)
		L-12: "Dili nako pirmi masabtan ang math, ug dili ko matabangan sa akong ginikanan kay dili sila kabalo." (I don't always understand math,

	Parents' Limited Math Knowledge	and my parents can't help me because they don't know how.) L-19: "Dili ko makapangayo og tabang sa akong ginikanan kay dili sila kabalo sa pagsulbad sa mga problema sa math." (I can't get help from my parents because they don't know how to do the math problems.) L-24: "Mosulay ko og pangutana sa akong mama, pero dili niya masabtan ang math, mao nga dili ko matabangan." (I try to ask my mom, but she doesn't understand the math, so I can't get help.) L-31: "Sa akong tan-aw, dili kabalo akong ginikanan kung giunsa pagtabang nako sa math kay wala man sila mutabang nako." (I don't think my parents know how to help me with math because they never help me with it.) L-33: "Sa akong hunahuna, dili kabalo akong ginikanan sa pagpatin-aw sa mga problema sa math kay lahi kini sa ilang nahibal-an kaniadto." (I don't think my parents know how to explain the math problems to me because it's different from how they learned it.)
	Differences Between Old and New Math Methods	L-37: "Dili masabtan sa akong ginikanan ang math nga among gi-eskewlahan karon, mao nga dili sila kabalo motabang nako." (My parents don't understand math the way we learn it at school, so they don't know how to help me.)
Learners' Struggles with Sustained Focus and Motivation in Math Class	Boredom and Disinterest During Math Lessons	L-8: "Lisod magpabilin nga naka-focus sa klase sa math kay dali ko maboring." (It's hard to stay focused in math class because I get bored quickly.) L-15: "Moundang ko'g pagpaminaw human sa pipila ka minutos sa klase sa math." (I stop listening after a few minutes in math class.) L-33: "Dali ko mawala og gana kung magbuhat mi og math problems sa klase." (I lose interest quickly when we do math problems in class.)
	Loss of Focus Due to Task Demands	L-14: "Madisturbo ko kung dugay kaayo masulbad ang math." (I get distracted when math takes too long to solve.) L-25: "Mawala akong focus kung daghan kaayo mi'g buhaton nga math problems." (I lose focus when we do too many math problems.) L-32: "Madisturbo ko kung magdugay mi og usa ka math problem." (I get distracted when we spend too much time on one math problem.) L-36: "Dili ko makasabot sa math kasingdali sa akong mga kaklase." (I don't understand math as fast as my classmates.)
	Difficulty Keeping Pace with the Lesson	L-38: "Mabati ko nga nabyaan kay lisod para nako ang math." (I feel left behind because math is hard for me.)

Learners attended the National Learning Camp at SAES, Carmen District experienced several barriers that impeded their ability to access math lessons and fully participate in their math lessons. One major barrier was their access to many essential items to be able to engage in their lessons. Specifically, many students shared they did not have access to basic items that are essential to math, including calculators, charts, number lines, and technology, such as tablets and computers. Many students had trouble accessing learning materials online for school or at home, due to poor internet connections. (UNESCO, 2021) explains how the equality of all learners is affected by a persistent digital divide negatively impacting the equity of education in disadvantaged areas.

Without internet access, many students missed the opportunity to take part in online learning materials. The lack of technology or online resources prevented students from recreating their favorite interactive math learning activities, which were game-based activities, many students found this format to be enjoyable and engaging. "There wasn't enough hands on and play/all the way activities. When we used manipulatives games and visual

aids, we enjoyed them, but they weren't every lesson." This statement made by a student clearly expresses their views about the lack of options in their math lessons. Agreeing with other literature, Hattie and Clarke (2020) and Tomlinson (2019) describe how active learning helps students stay engaged, and how deep understanding of concepts increases when hands-on and engaging activities are available.

In addition, the learning environment was noisy or conducing to some distractions, which may have impacted other learners' ability to focus on lessons and engage in the learning process. Another concern was parental support. Many parents' work limits their ability to support their child with their homework, or they were not aware of modern forms of mathematics instruction, making it hard to help with homework or illustrate the problem. Additionally, many students expressed their lack of support at home when the curriculum was different from the methods the students' parents were familiar with, as outlined in the literature on the extent to which parents matter in children's learning and the negatives of low involvement (Epstein, 2020; Hoover-Dempsey et al., 2021).

Learners' motivation and focus were also issues for many learners. Some learners found the math lessons dull, boring, and/or frustrating, especially when math tasks were monotonous or too challenging for them. Others expressed concern that they were falling behind fellow classmates because they can't keep pace. These examples demonstrate the need for an instructional approach that account for the differences in students' pacing and includes various motivation strategies – a crucial aspect of current research based on student-centered teaching (Darling-Hammond et al., 2022; Emmer & Evertson, 2019).

Other barriers raised by the students were the use of relatable, real-life examples in math lessons. When ideas become abstract (and often feel unrelated to students' lives) it was harder to conceptualize and maintain their engagement. Using culturally relevant resources and tactile opportunities could enhance learners' connection between new learning and what they already know, bringing familiarity and confidence.

However, teachers found it difficult, and limited for many reasons, to create these opportunities. These reasons focused on limited resources and limited time. Due to both limited time to prepare daily lessons and limited distance learning resources, teachers felt restricted in being able to create learning opportunities that represented their learners' backgrounds and experiences.

Ultimately, these barriers-as-identified by learners demonstrate the need to provide more culturally relevant, engaging, inclusive, and resourceful learning environments to support the best outcomes for a program like the National Learning Camp.

5. Based on the findings of the study, what improved strategies can be integrated in the implementation of the National Learning Camp (NLC) in San Agustin Elementary School, aligned with the updated DepEd Order No. 010, s. 2025 guidelines?

Based on the need and experience from the first cycle of the implementation of the National Learning Camp in Mathematics at SAES, Carmen District, this project proposal represents a response with enhanced strategies under the provisions of the most recent DepEd Order No. 010, s. 2025. Specifically, the objectives are to increase student participation, provide learners practice and master key mathematics concepts and help build teachers' capacity to teach engaging, differentiated lessons. This proposal also draws upon the findings from the previous study that investigated the early impacts of NLC to build upon current successes and take steps to grow the positive impacts of the program carried out at early grades. Additionally, the project aims to strengthen collaboration among stakeholders—teachers, parents, and community partners—to create a more supportive and sustainable learning environment for mathematics education.

Table 9. Project Proposal

Project Title	Project MATHRISE: Mathematics Advancement Through Holistic, Responsive, and Inclusive Strategies for Engagement
Rationale	The NLC showed potential in improving early graders' mathematical skills and classroom engagement. However, challenges like limited resources, learner motivation, and behavioral issues hindered its full effectiveness. With the revised DepEd Order No. 010, s. 2025, the integration of inclusive, resource-enhanced, and learner-centered strategies is necessary to maximize learning outcomes.
Project Objectives	To enhance the delivery of NLC through resource innovation and community engagement. To promote learner motivation and engagement via play-based and culturally responsive learning. To strengthen teacher capacity and collaboration through peer coaching and resource sharing. To foster stronger partnerships among stakeholders for sustained support and monitoring.

Expected Outcomes	Increased percentage of learners in the Enhancement and Consolidation Camps. Improved learner participation, motivation, and collaboration. Enhanced teacher skills in differentiated and inclusive instruction. Greater parental and community support for learner progress.	
Target Beneficiaries	Grade 1–3 learners participating in the Mathematics NLC Mathematics teachers Parents and guardians School learning support staff	
Improved Strategies for Mathematics Instruction		
Key Finding	Strategy	DepEd Order Alignment
Improper learner grouping	Administer diagnostic test through Rapid Mathematics Assessment (RMA) and group learners accurately into Enhancement, Consolidation, or Intervention.	Section V – Learner Assessment
Lack of teacher capacity in differentiated instruction	Conduct Math-focused LAC sessions and workshops on remedial strategies and concrete-pictorial-abstract (CPA) approach. Pair teachers through a peer coaching system for lesson co-planning and reflection.	Section VII – Teacher Capacity Building
Insufficient localized materials	Create workbooks and activity sheets using local context and Filipino culture (e.g., Apply culturally responsive strategies, integrating local objects, currency, fruits, games, farming tools, and sari-sari store problems) Launch a "Math Learning Resource Drive" (visual aids, manipulatives, printed worksheets). Create a "Math Tool Corner" per classroom with locally sourced and play-based materials. Incorporate play-based and gamified math activities aligned with curriculum.	Section VI – Learning Materials
Weak stakeholder engagement	Hold Math Learning Orientation for parents and community-based Math Challenge Days. Organize Parent Math Support Workshops to train guardians in basic math coaching at home. Schedule "Community Math Days", inviting local stakeholders to participate in fun math events.	Section VIII – Stakeholder Support
Major Activities and Timeline		
Activity	Timeline	Involved Persons

Orientation and Planning with NLC Math Team	March 17, 2025	School Head, Math Coordinators
Administering Diagnostic Math Tests	March 20-21, 2025	Grade-level Math Teachers
Learner Grouping and IM Development	March 27-28, 2025	LAC Team, Learning Support
Teacher Workshop on Math Remediation Strategies	April 3-4, 2025	Master Teachers, District Math Coordinator
NLC Implementation in Mathematics	May 19 to June 6, 2025	NLC Teachers
Weekly Monitoring and Coaching	Weekly (Fridays)	Project Team, School Head
Post-Assessment in Math	June 10, 2025	NLC Math Teachers
Project Evaluation and Stakeholder Forum	June 13, 2025	School and Community Leaders
III. Role and Responsibilities of Stakeholders		
Stakeholder	Role and Responsibilities	
School Head	Oversee project implementation, mobilize resources, and facilitate stakeholder meetings.	
NLC Teachers	Develop differentiated lessons, apply responsive strategies, and document learner progress.	
Learners	Participate actively in activities, reflect on their learning, and collaborate with peers.	
Parents/Guardians	Support learners at home, attend orientation, and participate in feedback sessions.	
Barangay Officials/PTA	Provide local resources (e.g., venue, materials), and help disseminate information.	
School Governing Council (SGC)	Coordinate community involvement and monitor implementation progress.	
District Math Coordinator	Provide technical assistance and evaluate instructional quality.	
DepEd Partner Organizations	Support through donations, training, and learning toolkits.	
Budgetary Requirements (Estimates)	Item	Cost (PHP)
	Printing of Diagnostic Tests and Workbooks	₱6,000
	Teacher Training Materials and Meals	₱4,000
	Localized Math Kit Materials	₱8,000
	Stakeholder Engagement Activities	₱3,000
	Peer Coaching/Workshop Snacks	₱1,500
	Parent Orientation Snacks	₱1,500
	Community Math Day Materials	₱3,000
	Monitoring Tools and Supplies	₱2,000
	Tokens for Recognition	₱3,000
	Contingency Fund	₱2,5000
	Total Estimated Budget	₱34,5000

Table 9 Cont.

Monitoring and Evaluation	Use pre- and post-NLC Rapid Math Assessments to track learner growth. Weekly formative math assessments and progress tracking Lesson observation and coaching logs Collect feedback through regular reflection forms and mid-camp reviews with teachers and learners. End-of-program evaluation survey for stakeholders
Sustainability Plan	Materials developed (e.g., diagnostic tools, localized modules) will be archived for reuse. Trained teachers will serve as mentors for future NLCs. Stakeholder partnerships will be formalized through MOUs to ensure continued community support. Institutionalize successful strategies into regular classroom instruction. Build a school-based NLC Resource Center through community donations. Establish annual Partnership Recognition Program for sustaining external support.

Validated by:

ROSLYN E. DESPE — ANECITA D. DEMETILLO

Master Teacher I — School Principal II

4. CONCLUSIONS and RECOMENDATIONS

4.1 Conclusions

Based on the findings of the study, the following conclusions are given.

The initial implementation of the National Learning Camp at SAES, Carmen District revealed a complex interplay of positive outcomes and challenges. While the camp fostered increased engagement, inclusive relationships, and effective assessment practices, resource limitations, and motivation difficulties were notable obstacles. Both teachers and learners demonstrated adaptability and growth, emphasizing the importance of continued support and refinement to maximize the camp's benefits for all participants.

The implementation of the National Learning Camp at SAES, Carmen District, significantly improved learners' mathematical skills. The effectiveness of the camp's structured, differentiated approach is demonstrated by the significant change from a majority of students needing intervention to the majority reaching enhancement levels. This favorable result shows how well focused instruction, interesting activities, and encouraging learning settings can close learning gaps and advance mathematical competency.

The successful implementation of the National Learning Camp at SAES, Carmen District, was greatly supported by key facilitating factors from both teachers and learners. Collaborative practices, learner autonomy, and culturally responsive instruction enhanced engagement and academic growth. Teachers' professional collaboration and adaptive teaching further strengthened the learning environment. Overall, these factors contributed to a positive and inclusive camp experience that promoted meaningful learning and development.

The National Learning Camp's implementation at SAES, Carmen District was hampered by several issues impacting teachers and students. Effective teaching and learning suffered from limited resources, poor classroom behaviour, and inadequate parental support. Less interesting teaching strategies, poor materials, and difficulties keeping motivation and focus caused learners trouble. Eliminating these obstacles will help the camp to be more effective and enhance the learning process for every participant.

The National Learning Camp in Mathematics at SAES, Carmen District exposed a number of issues that limited its general efficacy including improper learner grouping, insufficient teacher capacity, lack of localized materials, and poor stakeholder involvement. Furthermore, impeding tracking and improvement of learner progress was the lack of organized monitoring and evaluation. Still, the new DepEd Order No. 010, s. 2025 offers a promising road to solve these issues and increase the influence of the program since it offers a supporting policy framework that fits suggested improvements in Project MATHRISE. This alignment ensures that the program's strategies are not only innovative but also grounded in nationally endorsed educational priorities and standards.

4.2 Recommendations

The following recommendations are based on the data that has been analysed.

Division of Agusan del Norte. It is advised for the Division of Agusan del Norte to institutionalize support systems, maintaining and growing best practices seen during the NLC. This means including into the larger educational framework differentiated instruction, formative assessment, and culturally responsive teaching. By routinely tracking learner development and program impact using instruments like the RMA, the division should also strengthen its monitoring and evaluation systems. Furthermore, the provision of sufficient teaching tools and resources has to be given top priority using funding allocations or alliances with local government agencies and non-governmental organizations.

School Heads. School heads play a crucial role in localizing the success of the program. Regular in-service training on differentiated instruction, efficient classroom management, and the incorporation of digital and localized materials should be their main focus in order to increase teacher capacity. Closing resource gaps will be made possible by the effective management and distribution of current resources as well as the search for new assistance. Establishing professional learning communities where educators can exchange tactics, receive coaching, and further their professional development is another way that school administrators are urged to promote a collaborative school culture.

Teachers. Differentiated instruction based on precise learner grouping using diagnostic tools must be applied consistently by educators. Regular use of formative assessments by teachers allows them to track students' progress and give timely feedback. In order to improve comprehension and learner motivation, they are also urged to create interesting and culturally appropriate lessons that relate mathematical ideas to actual situations, like utilizing local money or well-known items.

Stakeholders (e.g., Parents, Local Government, Community). Parents, local government agencies, and community partners are among the stakeholders who are encouraged to increase their participation in the educational process. Active stakeholder engagement benefits teachers and schools by offering extra resources to support instruction and reinforcement of learning at home. Community partnerships should be developed to increase the availability of locally relevant learning resources and infrastructure support, and parents, in particular, should be urged and assisted to become more involved in their children's educational journey.

Future Researchers. For future researchers, it is recommended to explore the long-term outcomes of NLC participation on learner achievement and retention, as well as to assess the scalability of successful strategies such as Project MATHRISE. Further research on effective models of stakeholder engagement and the impact of culturally responsive teaching in foundational mathematics may also offer valuable insights for improving education delivery in similar contexts.

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