



**TEACHERS' AND PARENTS' EXPERIENCES ON BASIC MATHEMATICAL
FACTS IN SCHOOL AND AT HOME: BASES FOR COLLABORATIVE
ENGAGEMENT PROGRAM**

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ABSTRACT

This qualitative phenomenological study explored the experiences of teachers and parents in supporting learners' mastery of basic mathematical facts at Jelicuon Elementary School during the School Year 2025–2026. Findings showed that teachers supported learning through engaging hands-on activities, consistent practice, integration of mathematics into daily routines, and individualized support and remediation. Parents contributed by using practical learning tools, step-by-step instruction, emotional support, patience, and short but regular practice sessions at home. The study also identified challenges such as limited resources, difficulties in sustaining active learning and regular practice, varied learner engagement, and balancing instruction with daily routines. To cope, teachers used motivational activities, provided personalized support, and collaborated with parents, while parents adopted structured sessions, interactive activities, and positive reinforcement. Overall, coordinated school-home support strengthened learners' fluency, confidence, and interest in mathematics.

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Keywords: *Teachers' and Parents' Experiences, Basic Mathematical Facts, Collaborative Engagement*

INTRODUCTION

Mathematics was one of the fundamental subjects in the basic education curriculum, as it equipped learners with critical thinking, problem-solving, and analytical skills essential for their academic growth and daily life (Department of Education (DepEd), 2022). Among the essential foundations of mathematics were basic mathematical facts—such as addition, subtraction, multiplication, and division—which served as building blocks for higher mathematical concepts. When learners mastered these facts, they gained confidence and efficiency in solving more complex problems. However, many students continued to struggle with acquiring fluency in these basic operations, which in turn affected their overall performance in mathematics (Siegler et al., 2021).

The responsibility of reinforcing mathematical learning did not rest solely within the school environment. Teachers played a critical role in introducing and guiding learners toward understanding mathematical concepts through structured lessons and instructional strategies (DepEd, 2022). At the same time, parents served as key partners in extending and reinforcing these learnings at home by providing support, encouragement, and practice opportunities (Tan & Li, 2021). The collaboration between teachers and parents was recognized as a significant factor in improving learners' academic achievement, as consistent reinforcement of knowledge in both school and home environments helped solidify learning (Epstein, 2020).

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Despite its importance, challenges remained. Teachers encountered limitations such as large class sizes, time constraints, and varied learning paces among students (Flores, 2020). Parents, on the other hand, struggled with limited mathematical knowledge, lack of time, or uncertainty about effective strategies to support their children’s learning (Tan & Li, 2021). These challenges highlighted the need to examine and understand the lived experiences of both teachers and parents in reinforcing learners’ mastery of basic mathematical facts.

This study sought to explore the experiences of teachers and parents in their shared role of supporting learners’ mathematical development. By investigating their strategies, challenges, and perceptions, the research aimed to provide insights into how school and home reinforcement could be strengthened to enhance learners’ mastery of basic mathematical facts. Ultimately, the findings were expected to contribute to more effective partnerships between teachers and parents, leading to improved teaching practices, stronger parental involvement, and better learning outcomes in mathematics.

MATERIALS AND METHODS

Research Methodology

This chapter presents the research method, research design, participants of the study, data-gathering procedures, research instrument, and data analysis that were used to examine the parents’ and teachers’ experiences in learners’ learning of basic mathematical facts in school and at home in Jelicuon Elementary School during the school year 2025–2026.

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Research Method

The research method utilized in this study was qualitative research employing in-depth interviews. According to Creswell and Creswell (2021), qualitative research is designed to explore and understand the meanings individuals or groups ascribed to a social or human problem. The descriptive qualitative method, as described by Sutton and Austin (2021), was used to provide a detailed and accurate description of the participants' experiences, perspectives, and practices related to reinforcing learners' mastery of basic mathematical facts.

During the interview, the researcher and the interviewee were allowed to sit together at an appropriate distance, ensuring comfort and confidentiality. The participants were encouraged to reflect on and share their views on a series of questions concerning their experiences in supporting learners' mathematical learning both at school and at home. The aim was to obtain in-depth insights into the participants' real-life experiences and the social contexts that influenced their reinforcement practices.

Research Design

The study used a phenomenological research design. Phenomenology is a philosophical and methodological approach to qualitative research that seeks to understand individuals lived experiences and the meanings they attach to them. The goal of phenomenology was to explore how teachers and parents perceived and interpreted their experiences in reinforcing learners' mastery of basic mathematical facts both at school and at

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home. This design allowed the researcher to gain insight into participants' subjective perspectives and the essence of their shared experiences.

According to Neubauer et al. (2020), phenomenology focuses on understanding and describing how individuals make sense of their lived experiences from a first-person point of view. It emphasizes intentionality—how people's consciousness is always directed toward something—and seeks to uncover the meanings embedded in these experiences. In this study, phenomenological interviews were conducted to capture teachers' and parents' insights, reflections, and interpretations regarding their reinforcement practices. This approach helped the researcher reveal the underlying essence of their experiences in both school and home contexts.

Participants of the Study

The participants of this study consisted of five (5) teachers and ten (10) parents of learners from Jelicuon Elementary School.

Sampling Design

Purposive sampling design was used in the study. Purposive sampling, according to Nikolopoulou (2023, June 22), refers to a group of non-probability sampling techniques in which units are selected because they have characteristics needed in the sample. In other words, units were selected "on purpose" in purposive sampling.

Research Instrument

The research instrument utilized in the study was a researcher-made interview schedule.

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The interview schedule had four open-ended questions that were aligned with the specific objectives of the study. Voice and video recorder were used for data gathering and documentation, depending upon the permission of the participants.

Validity of the Research Instrument

Prior to determining the validity of the interview schedule developed by the researcher, the adviser, the Dean of the Graduate School, and a panel of jurors who were experts in research, testing and assessment, and English were requested to validate each question for review and modification. Their evaluation ensured that all items were relevant, clear, and aligned with the objectives of the study.

Validity refers to the degree to which an instrument accurately measures what it intends to measure, as well as the appropriateness, meaningfulness, and usefulness of the inferences drawn from the results. According to Taherdoost (2020), validity is an essential criterion for evaluating research instruments and ensures that the content and structure of the tool are consistent with the study's variables and objectives. In this study, content validity was established through expert evaluation to verify the accuracy, clarity, and relevance of the interview questions.

Comments, corrections, and suggestions from the panel of validators were carefully reviewed and incorporated into the final version of the interview schedule using the validation form adapted from Good and Scates (see Appendix A).

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Data Gathering Procedures

Permits from the school head and individual participants were obtained to allow the researcher to conduct the study. The researcher personally went to the schools, community, or other locations convenient for the participants to conduct the interviews.

The researcher conducted interviews with the participants, but before this, the participants were encouraged to sign a waiver or permission form regarding their participation in the study.

In-depth interviews, voice and video recorder were also used to fully capture the participants' responses. The researcher consolidated all the collected data after the series of interviews.

Data Analyses

The gathered information was analyzed using thematic approach.

Thematic analysis is a method for systematically identifying, organizing, and offering insights into patterns of meaning (themes) across a qualitative dataset. It allows researchers to make sense of collective or shared meanings and experiences. In this study, thematic analysis helped the researcher summarize and interpret the data to understand the common experiences of teachers and parents in reinforcing learners' mastery of basic mathematical facts at school and at home.

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RESULTS AND DISCUSSIONS

This study was conducted to determine the experiences of teachers and parents in reinforcing learners' mastery of basic mathematical facts in school and at home at Jelicuon Elementary School during the school year 2025–2026.

The research method utilized in the study was qualitative method using in-depth interview.

The research design was the narrative approach with Thematic Analysis.

The participants of the study were the five teachers, who were teaching Mathematics and ten parents of Jelicuon Elementary School.

The researcher-made research questionnaires was used and validated by the experts. The interview was scheduled during the teachers' and parents' vacant time. Voice and video recorder were also used for data gathering and documentation depending upon the permission of the participants.

A panel of experts validated the interview schedule and considered all comments and suggestions relative to the validation of the tool.

Permits from the individual participants were obtained to allow the researcher to conduct the study. The researcher personally went to the schools/community/place convenient on the part of the participants to conduct the interview and virtual instruction was done prior to the interview.

Minimum health protocols mandated by the Inter Agency Task Force (IATF), Department of Health (DOH) guidelines amidst the pandemic, DepEd Orders on the Health

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protocols, Local Government Units and the Barangay health protocols were strictly observed and followed during the conduct of the study.

Using in-depth interview, voice and video recorders were provided to completely capture the interviewee's words or responses. The researcher consolidated all the collected data after series of interviews.

The information gathered was analyzed using thematic approach.

The following are the findings of the study:

The findings from teachers' responses indicate that using engaging and enjoyable hands-on activities, such as manipulatives, games, and visual aids, helps learners understand and retain basic mathematical concepts by making abstract ideas concrete and enjoyable. Teachers also emphasized the importance of consistent practice through daily exercises and short drills to develop fluency, automatic recall, and confidence in basic operations.

Integrating math into daily classroom routines, such as counting attendance or distributing materials, provides frequent, low-pressure opportunities for learners to connect math to real-life situations.

Monitoring students' progress and providing individualized support through small groups, one-on-one guidance, and peer-assisted learning ensures that learners receive focused attention, build confidence, and gradually master foundational math skills.

The findings on the challenges faced by teachers reveal that while active learning through manipulatives and game-based strategies is effective, it can be difficult to implement

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consistently due to limited resources, time constraints, and varying student engagement levels.

Teachers also reported that strengthening math skills through regular practice is challenging because some learners have different learning paces and may become easily frustrated or lose focus during repeated exercises.

Additionally, integrating everyday math into the classroom presents difficulties in maintaining continuity and ensuring that routine activities effectively reinforce basic concepts, especially when balancing other subjects and classroom demands.

Teachers reported several coping strategies to address challenges in teaching basic math. They use hands-on and motivational learning activities, such as manipulatives, games, and interactive exercises, to make lessons engaging and reduce student anxiety. Individualized support and remediation through small-group instruction, one-on-one guidance, and peer-assisted learning help students progress at their own pace and address specific learning gaps.

Additionally, collaboration with parents allows teachers to extend learning beyond the classroom, providing guidance for home practice and creating a consistent, supportive environment that reinforces skill mastery and builds student confidence.

Parents shared that using practical and concrete learning tools, such as manipulatives, flashcards, and household items, helps children visualize and understand mathematical concepts more easily. They also emphasized the importance of step-by-step teaching and

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clear examples, breaking lessons into manageable parts so children can master one skill at a time without feeling overwhelmed.

Additionally, parents highlighted that providing emotional support and patience, including encouragement, praise, and positive reinforcement, increases children’s confidence, reduces anxiety, and motivates them to persist in learning basic math facts.

Parents reported several challenges in supporting their children’s math learning. Using tangible tools and everyday objects can be difficult when resources are limited or when children lose interest in repetitive activities. Implementing step-by-step teaching requires careful planning and patience, especially when children learn at different paces or struggle to grasp new concepts. Providing consistent emotional support and patience can also be challenging, particularly when children become frustrated or resistant to practice. Lastly, maintaining short daily practice and regular review is sometimes difficult due to busy schedules, competing responsibilities, or lack of structured guidance on how to make practice both effective and engaging at home.

Parents reported several strategies to support their children in learning math effectively. They used structured and short learning sessions to prevent fatigue and maintain focus, breaking lessons into manageable parts for gradual understanding. Hands-on and interactive learning with manipulatives, games, and visual aids helped make abstract concepts concrete and engaging. Parents also emphasized positive reinforcement and motivation, providing praise, encouragement, and rewards to boost confidence, reduce anxiety, and encourage persistence in practicing basic mathematical skills.

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ISSN: 2704-3010

Volume VII, Issue III

February 2026

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Based on the findings, the following insights were drawn:

Teachers' experiences show that learners benefit most when math instruction is engaging, interactive, and practical. Using manipulatives, games, and visual aids helps make abstract concepts concrete, while consistent practice in both classroom and routine activities builds fluency and confidence.

Teachers also recognize that monitoring progress and providing individualized attention through small-group instruction or one-on-one guidance ensures that learners with different abilities receive the support they need to gradually master basic math facts.

The challenges faced by teachers reveal that implementing active learning and game-based strategies can be difficult due to limited time, resources, and varying student engagement. Strengthening math skills through regular practice is also challenging because students learn at different paces and may lose focus or become frustrated.

Additionally, integrating math into daily classroom routines requires balancing other subjects and ensuring that routine activities effectively reinforce key concepts.

Teachers cope with these challenges by using hands-on and motivational activities to engage learners, providing individualized support and remediation to address learning gaps, and collaborating with parents to extend practice and guidance beyond the classroom. This combination allows learners to progress at their own pace, maintain confidence, and receive consistent reinforcement.

Parents highlighted that using practical, concrete learning tools and step-by-step teaching helps children understand and retain math concepts effectively. Emotional support

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and patience are equally important, as encouragement and praise build confidence, reduce anxiety, and motivate learners to engage with mathematical tasks consistently.

Parents face challenges in using tangible tools and everyday objects when resources are limited, and implementing step-by-step instruction can be difficult for children who learn at different rates. Maintaining patience while supporting learners and ensuring short, regular practice sessions can be challenging, particularly with busy schedules or when children resist practice.

To address these challenges, parents adopt structured, short learning sessions to keep children focused, use hands-on and interactive activities to make learning engaging, and provide positive reinforcement and motivation to boost confidence and persistence. These strategies help children gradually develop mastery of basic math facts while maintaining interest and reducing frustration.

The study suggests that a structured partnership between school and home can significantly improve learners' mastery of basic math skills. Providing parents with guidance and training equips them with strategies and tools to support their children effectively at home, ensuring practice is consistent and meaningful.

Supplying students with activity kits encourages hands-on learning and allows families to reinforce lessons in an organized and accessible way. Regular interactive sessions at school, involving both parents and learners, create opportunities to model effective strategies, promote engagement, and make learning enjoyable. Continuous communication and monitoring between teachers and parents ensure that learners' progress is tracked, challenges

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are addressed promptly, and support is coordinated, resulting in a cohesive system that strengthens both skill development and confidence in mathematics.

The study also highlights the need for future research on the long-term effects of structured school-home partnerships on learners' fluency in mathematical facts, the effectiveness of hands-on tools and interactive activities across different age groups and learning styles, and the role of sustained parent engagement, communication, and emotional support in improving learners' motivation and confidence.

CONCLUSION

In the light of the findings and insights derived from the study, the following recommendations are forwarded:

Schools should implement programs that actively involve both teachers and parents in helping learners master basic mathematical facts through consistent and meaningful practice at school and at home. These programs should promote collaboration between teachers and parents in reinforcing addition, subtraction, multiplication, and division through shared strategies and responsibilities.

Teachers are encouraged to use interactive, hands-on, and practical strategies such as manipulatives, games, visual aids, and routine classroom activities to make mathematical concepts more engaging and easier to understand. They should also provide regular practice, monitor learners' progress, and give individualized support through remediation, small-group instruction, or one-on-one guidance.

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Parents should be provided with practical tools, simple step-by-step strategies, and accessible learning resources to support their children’s mathematical development at home. Schools may organize parent orientations or workshops to guide parents in conducting short, focused practice sessions and in providing encouragement, patience, and emotional support to build learners’ confidence and persistence.

Regular communication between home and school should be maintained through meetings, progress updates, notebooks, or digital platforms to monitor learners’ performance, address difficulties early, and ensure coordinated support. Schools may also provide activity kits or take-home materials and organize interactive activities such as math games, workshops, or family learning sessions to strengthen the connection between school learning and home practice.

For future research, studies may examine the long-term effects of school-home partnerships on learners’ fluency in mathematical facts, identify the most effective hands-on tools and interactive activities for different learners, and explore ways to sustain parent engagement and emotional support in mathematics learning.

Overall, these recommendations aim to strengthen the partnership between school and home to improve learners’ mastery of basic mathematical facts, increase their interest in mathematics, and build their confidence for long-term success.

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ISSN: 2704-3010

Volume VII, Issue III

February 2026

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INSTABRIGHT e-GAZETTE

ISSN: 2704-3010

Volume VII, Issue III

February 2026

Available online at <https://www.instabrightgazette.com>



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09543-2.

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