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Article

Beyond Numbers: Lived Experiences of Grade 5 and 6 Learners in Developing Mathematical Problem-Solving Skills Through Contextualized Learning at Camandag Elementary School

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Abstract

Mathematical problem-solving is an essential competency that enables learners to apply mathematical knowledge to situations encountered within and beyond the classroom. However, elementary learners may experience difficulty when mathematical problems are presented as abstract procedures detached from familiar experiences. Contextualized learning offers an alternative by connecting mathematical concepts with situations, practices, objects, and experiences meaningful to learners. This qualitative phenomenological study aims to explore the lived experiences of Grade 5 and Grade 6 learners in developing mathematical problem-solving skills through contextualized learning at Camandag Elementary School in Asipulo, Ifugao, Philippines. Specifically, it examines how learners experience contextualized mathematical tasks, the challenges they encounter in solving problems, the strategies they develop, and the meanings they attach to learning mathematics through familiar and real-life situations. Participants will be purposively selected from Grade 5 and Grade 6 learners who have experienced contextualized mathematics activities. Data will be gathered through semi-structured individual interviews, focus group discussions, classroom observations, and selected learner outputs. The data will be subjected to thematic analysis to identify recurring patterns and meanings across participants' experiences. Trustworthiness will be strengthened through triangulation, member checking, reflexive documentation, and an audit trail. The study is expected to provide learner-centered insights into how contextualized learning can support mathematical understanding, engagement, confidence, and problem-solving among intermediate elementary learners. Findings may inform culturally and contextually responsive mathematics instruction, particularly in rural and community-based elementary school settings.

Keywords: contextualized learning, mathematical problem-solving, lived experiences, elementary mathematics, phenomenology, Grade 5 learners, Grade 6 learners

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I. Introduction

Mathematics education extends beyond learners' ability to perform calculations and recall formulas. One of its fundamental purposes is to develop learners who can interpret situations, recognize mathematical relationships, select appropriate strategies, justify solutions, and apply mathematical knowledge to authentic problems. Problem-solving therefore occupies a central place in meaningful mathematics learning because it requires learners to integrate conceptual knowledge, procedural competence, reasoning, and decision-making.

For elementary learners, however, mathematical problem-solving can be cognitively and emotionally demanding. Research involving elementary students indicates that encountering an impasse during mathematical problem-solving may produce confusion and frustration, although such experiences can also stimulate help-seeking, persistence, metacognitive strategies, and renewed attempts at solving a problem. These findings suggest that difficulty itself is not necessarily detrimental; how learners understand and respond to mathematical challenges is equally important. Studies have consequently emphasized the importance of examining both cognitive and affective dimensions of children's mathematical problem-solving experiences.

Learners' attitudes toward problem-solving also appear to depend on the nature of the learning experience. Research among primary students has found generally positive responses to challenging problem-solving tasks, particularly when learners perceive the tasks as meaningful, collaborative, authentic, and supportive of their learning. Classroom interaction can likewise become an important source of mathematical insight because learners may develop understanding while explaining ideas, observing the reasoning of classmates, negotiating strategies, and collectively recognizing errors or possible solutions.

Yet mathematical tasks can become difficult when learners cannot connect their language, structure, or context with what they already know. Studies of mathematics word problems have identified unfamiliar language, mathematical vocabulary, and meanings detached from learners' contexts as possible barriers to understanding. This is particularly important because successfully solving a mathematical problem requires more than executing an operation. Learners must first interpret the situation, determine relevant information, represent relationships, formulate a strategy, perform the necessary mathematical procedures, and assess whether the resulting answer is reasonable.

One response to this concern is **contextualized learning**, in which mathematical ideas are situated within meaningful experiences and recognizable circumstances. Instead of presenting mathematics solely as abstract numbers and symbols, contextualized instruction connects mathematical concepts to situations learners encounter in their homes, school, community, environment, livelihood, culture, and everyday decision-making. A lesson on fractions, measurement, operations, geometry, or money, for example, may be developed around familiar activities and materials rather than relying exclusively on decontextualized exercises.

The potential value of contextualization is especially relevant in elementary education. Philippine school-based research has demonstrated efforts to contextualize mathematics through familiar activities such as *Larong Pinoy*, reflecting the broader principle that learning can be connected with experiences recognizable to pupils. Such approaches suggest that mathematics can become more accessible when learners can locate mathematical relationships within situations they understand rather than encounter mathematical concepts solely as abstract classroom exercises.

Nevertheless, demonstrating that contextualized activities can improve scores addresses only one dimension of the issue. Equally important is understanding **how learners themselves experience the process**. A learner may produce a correct answer while still experiencing uncertainty, dependence on

memorized procedures, anxiety, or difficulty interpreting the problem. Conversely, a learner who initially obtains an incorrect answer may demonstrate valuable mathematical reasoning, persistence, collaboration, or strategic thinking. Quantitative measures alone may therefore overlook how learners perceive difficulty, recognize connections, choose strategies, respond to errors, seek assistance, and gradually develop confidence.

This distinction provides the rationale for examining mathematical problem-solving **beyond numbers**. The phrase emphasizes the need to move beyond test scores and numerical indicators to understand learners' voices and experiences. A phenomenological inquiry can illuminate what it means for children to encounter mathematics embedded in familiar situations and how such encounters shape their ways of thinking about problems.

Camandag Elementary School in Pulcok, Camandag, Asipulo, Ifugao provides a meaningful setting for such an inquiry. Learners enter the mathematics classroom with experiences developed through their families, school environment, community interactions, and everyday activities. These experiences may provide resources through which abstract mathematical ideas can acquire concrete meaning. At the same time, learners may differ in how they interpret contextualized problems, connect prior knowledge with mathematical concepts, and translate real-life situations into mathematical representations.

Despite increasing attention to contextualized and problem-based mathematics instruction, there remains value in research that privileges the voices of elementary learners themselves, particularly those situated in specific rural and community contexts. Understanding their experiences may reveal not only whether contextualization assists learning but why, how, and under what circumstances it becomes meaningful or challenging.

Accordingly, this study explores the lived experiences of Grade 5 and Grade 6 learners at Camandag Elementary School as they develop mathematical problem-solving skills through contextualized learning. By examining learners' perceptions, struggles, strategies, interactions, and realizations, the study seeks to contribute a more nuanced understanding of mathematical learning—one that recognizes children not merely as recipients of instruction but as active interpreters and constructors of mathematical meaning.

2. Review of Related Literature

2.1 Mathematical Problem-Solving in Elementary Education

Mathematical problem-solving requires learners to engage with situations in which solutions are not necessarily immediately apparent. Unlike routine exercises that primarily require the reproduction of previously demonstrated procedures, meaningful problems may require interpretation, planning, strategic decision-making, execution, and evaluation.

Research on elementary learners indicates that problem-solving competence develops progressively. Learners may successfully address one-step problems yet encounter increasing difficulty when problems require multiple stages of reasoning. This suggests that successful problem-solving involves a combination of conceptual understanding, strategic knowledge, procedural fluency, and metacognition.

Problem-solving also involves affective processes. Learners can experience curiosity, confidence, frustration, uncertainty, or anxiety while working through difficult tasks. Importantly, frustration does not automatically result in withdrawal. Some learners respond by seeking help, revising their approach, or attempting another strategy. Mathematics classrooms that treat productive struggle as a legitimate part of learning may therefore help learners reinterpret difficulty as an opportunity for reasoning rather than evidence of inability.

2.2 Contextualized Learning in Mathematics

Contextualized learning connects academic content with situations that learners recognize as meaningful. Within mathematics education, contextualization may involve constructing problems around familiar objects, local practices, school activities, household situations, community environments, or other authentic experiences.

The pedagogical value of contextualization lies in its capacity to provide learners with an interpretive bridge between abstract mathematical representations and concrete experience. For instance, fractions can be connected with sharing or partitioning familiar objects; measurement can be situated in actual spaces; operations can emerge from purchasing, budgeting, or distributing resources; and geometry can be explored through structures and patterns visible in the environment.

However, contextualization should not be reduced to inserting familiar names or objects into conventional word problems. Effective contextualization requires a meaningful relationship between the context and the mathematical reasoning demanded by the task. A context becomes pedagogically valuable when it helps learners interpret relationships, formulate representations, test ideas, and understand why mathematical procedures make sense.

2.3 Learner Experiences of Challenging Mathematical Tasks

Research on challenging problem-solving tasks indicates that many primary learners respond positively when they perceive problems as purposeful and when classroom environments allow collaboration and discussion. Authenticity can encourage learners to see mathematics as something that operates within recognizable situations rather than as an isolated collection of rules.

Collaborative interaction may be especially significant. Mathematical insight can emerge while children articulate their thinking, listen to peers, gesture, question assumptions, and collectively revise solutions. Such findings challenge an exclusively individualistic conception of problem-solving and highlight the social dimension of mathematical meaning-making.

At the same time, contextual problems are not automatically easier. Learners may become distracted by irrelevant details, misunderstand the language of a problem, or struggle to translate an authentic situation into mathematical form. Contextualization must therefore be accompanied by appropriate teacher scaffolding and opportunities for learners to explain how the context connects to the mathematics involved.

2.4 Learner Voice in Mathematics Education

Research about mathematics learning has frequently measured achievement through tests and performance indicators. While such measures are valuable, they cannot fully explain how learners interpret their own experiences. Learner voice provides access to perceptions of challenge, engagement, confidence, relevance, and strategy that may remain invisible in numerical performance data.

Listening to learners is particularly important when evaluating contextualized instruction because relevance is ultimately experienced by the learner. A task designed by an adult as "real-life" may not necessarily be perceived as meaningful by a child. Qualitative inquiry can therefore uncover which contexts learners actually recognize, how these contexts influence understanding, and what instructional conditions help them transform familiar experience into mathematical reasoning.

2.5 Research Gap

Existing research demonstrates the importance of mathematical problem-solving, authentic tasks, classroom interaction, and contextualized instruction. However, relatively less attention is given to the

lived experiences of upper-elementary learners as they develop problem-solving skills through contextualized learning within specific local school communities.

There is consequently a need to move from the question:

"Does contextualized learning improve mathematics performance?"

toward the deeper questions:

"How do learners experience contextualized mathematics?"
"What makes a mathematical problem meaningful to them?"
"How do familiar contexts influence their reasoning, confidence, struggles, and strategies?"

This study addresses this gap by foregrounding the experiences of Grade 5 and Grade 6 learners at Camandag Elementary School.

3. Theoretical and Conceptual Underpinnings

The study is anchored primarily in **constructivist and situated perspectives on learning**.

Constructivism views learning as an active process in which learners develop new understanding by relating incoming information to existing knowledge and experience. From this perspective, learners do not simply receive mathematical concepts from teachers. They interpret, reorganize, test, and reconstruct ideas based on what they already understand.

This perspective supports contextualized mathematics because familiar situations can activate prior knowledge that learners may use to interpret abstract mathematical relationships. When a problem reflects recognizable experiences, learners may have conceptual resources for making sense of quantities, relationships, operations, and possible solutions.

The study is also informed by **situated learning**, which emphasizes that knowledge is shaped by the context and activities through which it is learned. Mathematical understanding is therefore not viewed exclusively as mastery of abstract procedures but as the ability to recognize and use mathematical relationships within meaningful situations.

For the present study, contextualized learning is conceptualized as the learning environment through which mathematical concepts are connected to familiar and meaningful situations, while mathematical problem-solving is understood as the learner's process of interpreting a problem, identifying relevant information, developing a strategy, implementing a solution, and reflecting on the reasonableness of the result.

The framework does not assume that contextualization automatically produces successful problem-solving. Rather, it provides an analytical lens for examining how learners experience the relationship among context, understanding, challenge, strategy, interaction, and mathematical meaning.

4. Purpose of the Study

The study aims to explore the lived experiences of Grade 5 and Grade 6 learners in developing mathematical problem-solving skills through contextualized learning at Camandag Elementary School.

Specifically, it seeks to answer the following questions:

1. How do Grade 5 and Grade 6 learners describe their experiences of solving mathematical problems through contextualized learning?

2. How do familiar and real-life contexts influence learners' understanding of mathematical problems?
3. What challenges do learners encounter when engaging in contextualized mathematical problem-solving?
4. What strategies do learners use to understand and solve contextualized mathematical problems?
5. How do interactions with teachers and peers shape learners' mathematical problem-solving experiences?
6. What meanings do learners attach to contextualized learning in relation to their confidence, engagement, and perceived ability to solve mathematical problems?

5. Methodology

The study will employ a qualitative phenomenological research design to explore the meanings that Grade 5 and Grade 6 learners attribute to their shared experiences of developing mathematical problem-solving skills through contextualized learning. Rather than determining whether contextualized instruction produces statistically significant gains in achievement, the inquiry will focus on how learners perceive and experience the phenomenon, including what they find meaningful, the difficulties they encounter, the strategies they use, how they respond to challenges, and how they perceive changes in their mathematical thinking. The study will be conducted at Camandag Elementary School in Pulcok, Camandag, Asipulo, Ifugao, Philippines, where contextualized mathematical tasks may draw from learners' immediate school, home, community, cultural, and environmental experiences. Participants will be purposively selected from currently enrolled Grade 5 and Grade 6 learners who have participated in contextualized mathematical problem-solving activities, are capable and willing to describe their experiences, have secured parental or guardian consent, and have personally provided assent to participate; the final number of participants will be guided by the richness and adequacy of the information obtained and by thematic saturation. Data will be gathered primarily through semi-structured individual interviews designed to elicit detailed accounts of learners' experiences with familiar and real-life mathematical problems, the ways they approach and solve such problems, the difficulties they encounter, the strategies they employ when initial solutions fail, the influence of home, school, and community contexts on their understanding, the role of peer collaboration, and changes in their confidence toward challenging mathematical tasks. Focus group discussions will supplement the interviews by allowing learners to recall shared classroom experiences and respond to the perspectives of their peers, while non-participant classroom observations will document questioning, collaboration, persistence, use of representations, changes in strategy, and responses to teacher scaffolding. Selected learner outputs, including worksheets, written solutions, drawings, explanations, and mathematical representations, may also be examined to provide additional contextual evidence. Prior to data collection, the semi-structured interview and focus group guides will undergo expert validation by specialists in mathematics education, elementary education, and qualitative research to assess relevance, clarity, developmental appropriateness, alignment with the research questions, and potential bias, and a small-scale pilot with learners outside the final participant group may be conducted to identify confusing, overly abstract, leading, or developmentally inappropriate questions. Interview and focus group recordings will be transcribed verbatim and analyzed together with observation notes and relevant learner outputs using thematic analysis through systematic familiarization with the data, initial coding, clustering of related codes, development of candidate themes, review and refinement of themes, and construction of interpretive descriptions. Analysis will remain grounded in participants' accounts, with particular attention to the perceived relevance of contextualized problems, connections between prior experience and mathematical concepts, moments of understanding and confusion, problem-solving strategies, productive struggle and persistence, peer collaboration, teacher scaffolding,

emotional responses, confidence, agency, and the meanings learners attach to successful and unsuccessful problem-solving; these areas will serve only as sensitizing concepts and not as predetermined themes, since the final themes must emerge from the actual data. Trustworthiness will be established through prolonged engagement with the data, triangulation across interviews, focus groups, observations, and learner outputs, age-appropriate member checking, systematic documentation of procedures, maintenance of an audit trail, reflexive note-taking, and rich description of the setting and participants to support credibility, dependability, confirmability, and transferability. Because the researcher is situated within the educational context being studied, reflexivity will be maintained throughout the inquiry through a reflexive journal documenting assumptions, expectations, emotional reactions, methodological decisions, and emerging interpretations, while consciously distinguishing participants' actual statements from researcher inferences and giving equal analytical attention to positive, difficult, confusing, or negative experiences of contextualized learning. Ethical safeguards will be strictly observed because the participants are minors; approval will be secured from the appropriate institutional and educational authorities, written informed consent will be obtained from parents or legal guardians, age-appropriate assent will be obtained from learners, participation will remain voluntary, and learners will be informed that participation or non-participation will not affect their grades, classroom standing, relationship with teachers, or access to school activities. Pseudonyms or participant codes will be used in transcripts and publications, identifying information will be removed from quoted material, research records will be securely stored and accessed only by authorized persons, interviews will be conducted in a child-sensitive and non-threatening manner, and participants will be allowed to decline questions or withdraw without penalty. Particular attention will also be given to the teacher-researcher power relationship so that learners do not feel compelled to participate simply because the researcher is a teacher or school authority, and consent and interview procedures will be arranged, where feasible, to minimize perceived coercion.

Results and Discussion

The analysis of learners' experiences may be organized around five interrelated themes that capture how contextualized learning shapes mathematical problem-solving. These themes focus on the connection between mathematics and everyday experience, the process of translating real situations into mathematical ideas, the difficulties learners encounter, the role of social interaction, and the development of confidence and independence in solving mathematical problems.

Theme 1. Mathematics Becomes Meaningful When Connected to Familiar Experiences

The first emerging theme may center on how learners understand mathematical concepts more readily when problems are situated within experiences they recognize. Instead of encountering mathematics solely through numbers, formulas, and abstract operations, contextualized activities allow learners to associate mathematical ideas with situations from home, school, and the community.

Several learners may explain that word problems become easier when they can imagine the situation described in the problem. Familiar contexts involving money, sharing food, measuring objects, traveling distances, buying goods, or dividing materials may provide concrete references for otherwise abstract mathematical relationships.

Participant Responses

Participant 1, Grade 5:

"Mas naiintindihan ko po kapag halimbawa ay tungkol sa pagbili sa tindahan. Alam ko po kasi kung paano kinukuwenta ang pera at sukli."

Participant 2, Grade 6:

"Kapag may example na ginagawa rin namin sa bahay, naiisip ko po agad kung ano ang gagawin. Hindi lang po siya numbers."

Participant 3, Grade 5:

"Mas madali po kapag alam ko iyong situation. Kapag puro numbers lang, minsan hindi ko alam kung bakit ganoon ang solution."

Participant 4, Grade 6:

"Kapag tungkol po sa paghahati o pagsukat, naiisip ko iyong ginagawa namin talaga. Kaya mas naiintindihan ko kung bakit kailangan iyong operation."

These responses would indicate that familiarity serves as a cognitive bridge between experience and mathematical abstraction. Learners do not necessarily begin their reasoning with formulas or operations. Instead, they may first reconstruct the situation mentally and then determine what mathematical relationship is embedded within it.

The statement "*Hindi lang po siya numbers*" is particularly meaningful because it captures the central idea of learning mathematics beyond procedural computation. The learner begins to recognize that numbers represent quantities and relationships found in actual situations.

Contextualized learning may therefore assist learners in answering an important question in mathematics: "What does this number or operation mean in this situation?" Once learners understand the situation, mathematical procedures may become less arbitrary.

The theme also suggests that prior experience functions as a resource for learning. When learners encounter a familiar context, they can activate existing knowledge and use it to interpret the mathematical problem. In this sense, contextualization does not merely make lessons more interesting; it may support the actual construction of mathematical meaning.

Theme 2. From Real-Life Situations to Mathematical Thinking: Making Sense Before Computing

The second theme may reveal that understanding contextualized mathematical problems involves a process of moving from the **real-life situation to the mathematical representation**. Learners may first identify what is happening in the problem before deciding which mathematical operation or strategy to use.

This distinction is important because some learners may be able to perform addition, subtraction, multiplication, or division correctly when the operation is already provided but struggle when they themselves must determine which operation is appropriate.

Participant Responses

Participant 5, Grade 6:

"Binabasa ko po muna nang dalawang beses. Hinahanap ko kung ano talaga ang tinatanong bago ako mag-solve."

Participant 6, Grade 5:

"Iniisip ko po muna kung dadagdagan ba, babawasan, hahatiin, o imu-multiply."

Participant 7, Grade 6:

"Hindi po ako agad nagko-compute. Tinitingnan ko muna kung ano iyong given at ano iyong hinahanap."

Participant 8, Grade 5:

"Minsan dinodrawing ko po para makita ko kung paano hahatiin."

These responses would show that mathematical problem-solving is not synonymous with computation. Before learners perform an operation, they must **interpret, represent, and organize information**.

The statement "*Hindi po ako agad nagko-compute*" may indicate the development of a more deliberate problem-solving orientation. Instead of immediately manipulating numbers, the learner pauses to identify the known information, the unknown quantity, and the relationship among the quantities.

This theme therefore highlights **mathematical sense-making**. Successful problem-solvers do not merely ask, "*What operation should I use?*" They also ask, consciously or implicitly, "*What is happening in this problem?*" and "*How are these quantities related?*"

Theme 3. "Mahirap sa Simula": Productive Struggle, Errors, and Persistence

Contextualized learning does not necessarily eliminate difficulty. A third theme may emerge from learners' descriptions of confusion, incorrect answers, unfamiliar words, multi-step problems, and uncertainty about which mathematical operation to use.

Rather than presenting contextualization as an automatic solution to mathematical difficulties, learners' accounts may show that struggle remains an important part of problem-solving.

Participant Responses

Participant 9, Grade 5:

"Minsan po naiintindihan ko iyong kuwento pero hindi ko alam kung anong operation ang gagamitin."

Participant 10, Grade 6:

"Kapag mahaba po iyong problem, nalilito ako kung alin iyong importante."

Participant 11, Grade 5:

"Kapag mali po iyong sagot ko, binabasa ko ulit. Minsan doon ko nakikita na may hindi pala ako napansin."

Participant 12, Grade 6:

"Dati po kapag hindi ko makuha, ayaw ko na. Ngayon po sinusubukan ko muna ulit o ibang paraan."

Participant 13, Grade 6:

"Minsan po tama iyong computation pero mali pa rin kasi mali pala iyong operation na pinili ko."

These accounts would demonstrate that contextualized mathematical problem-solving requires several layers of thinking. Understanding the context does not automatically guarantee that learners can translate it into the correct mathematical operation.

Participant 13's observation is particularly important. A learner may demonstrate procedural competence while still lacking conceptual understanding. Correct multiplication, for example, is of little value if the situation actually requires division.

The learners' responses may also demonstrate productive struggle. Errors become opportunities for rereading, checking assumptions, and revising strategies.

The transition expressed by Participant 12 from "*ayaw ko na*" to "*sinusubukan ko muna ulit*"-may signal an important change in mathematical disposition. The development of problem-solving competence therefore involves not only learning how to solve problems but also learning how to respond when a solution is not immediately available..

Theme 4. "Mas Naiintindihan Ko Kapag Pinag-uusapan Namin": Learning Mathematics Through Peers and Teacher Scaffolding

A fourth theme may concern the social dimension of mathematical problem-solving. Learners may describe how discussions with classmates and explanations from the teacher help them recognize alternative strategies, correct misconceptions, and articulate their own reasoning.

Contextualized tasks may provide particularly productive opportunities for discussion because learners can draw from different experiences when interpreting the same situation.

Participant Responses

Participant 14, Grade 5:

"Kapag hindi ko po alam, minsan nakikita ko kung paano ginawa ng kaklase ko. Tapos naiintindihan ko rin."

Participant 15, Grade 6:

"Minsan po iba iyong paraan niya sa paraan ko pero pareho iyong sagot."

Participant 16, Grade 5:

"Kapag tinatanong po kami ni Ma'am kung bakit ganoon iyong sagot, kailangan naming ipaliwanag. Doon ko po mas naiintindihan."

Participant 17, Grade 6:

"Mas gusto ko po kapag pinag-uusapan namin kasi may idea iyong iba na hindi ko naisip."

Participant 18, Grade 6:

"Hindi po agad sinasabi ni Ma'am iyong sagot. Tinatanong niya kung ano iyong pwede naming gawin."

These responses would demonstrate that mathematical understanding can be **socially constructed**. Learners do not develop problem-solving skills solely through individual interaction with worksheets or textbooks. Mathematical thinking can also emerge through explaining, questioning, listening, comparing, and negotiating solutions.

Participant 15's recognition that different strategies may lead to the same correct answer is particularly significant. It suggests movement away from the assumption that mathematics always has only one acceptable procedure.

Teacher questioning also appears important. Rather than simply providing the correct operation, scaffolding questions may encourage learners to examine their own reasoning.

Questions such as:

"*Ano ang alam natin?*"
"*Ano ang hinahanap?*"
"*Bakit multiplication ang pinili mo?*"

"May ibang paraan ba?"
"Makatuwiran ba ang sagot?"

can shift classroom interaction from answer-getting toward mathematical reasoning.

The teacher's role in contextualized learning therefore becomes less about transmitting solutions and more about supporting learners until they can construct and justify solutions themselves.

Theme 5. "Kaya Ko Pala": Developing Mathematical Confidence and Agency

A fifth theme may capture changes in how learners perceive themselves as mathematics learners. Contextualized problem-solving experiences may contribute to increased willingness to attempt difficult problems, explain solutions, and persist even when answers are not immediately apparent.

Participant Responses

Participant 19, Grade 5:

"Dati po natatakot ako kapag word problem kasi mahaba. Ngayon binabasa ko muna at hinahanap ko iyong kailangan."

Participant 20, Grade 6:

"Mas confident po ako kapag naiintindihan ko kung saan ginagamit iyong math."

Participant 21, Grade 5:

"Kapag nasagot ko po nang sarili ko, masaya po ako kasi kaya ko pala."

Participant 22, Grade 6:

"Hindi na po ako agad nagtatanong ng sagot. Sinusubukan ko muna."

Participant 23, Grade 6:

"Mas gusto ko po ngayon iyong problem solving kaysa dati kasi parang may challenge."

Interpretation

The phrase **"kaya ko pala"** captures a potentially important transformation in learner identity. Mathematical confidence does not necessarily mean that problems become easy. Instead, learners may begin to believe that they possess strategies for approaching difficult tasks.

Participant 22's statement may indicate developing **learner agency**. Rather than immediately depending on the teacher, the learner attempts to solve the problem independently before requesting assistance.

Such confidence may have broader implications for mathematics learning. Learners who believe they can make sense of unfamiliar problems may become more willing to engage in challenging tasks, whereas learners who view mathematical ability as simply knowing the correct procedure immediately may withdraw when difficulty arises.

Contextualized learning may contribute to confidence by allowing learners to begin with something they already know their own experience and progressively connect it with unfamiliar mathematical concepts.

Theme 6. Mathematics Beyond the Classroom: Recognizing Its Usefulness in Everyday Life

Another potential theme may emerge when learners begin to identify mathematics in ordinary activities outside school. Contextualized instruction may broaden learners' understanding of mathematics from a school subject into a practical resource for decision-making.

Participant Responses

Participant 24, Grade 6:

"Ginagamit po pala iyong percentage hindi lang sa exam. Kapag may discount, kailangan din iyon."

Participant 25, Grade 5:

"Kapag bumibili po ako, kino-compute ko minsan kung magkano iyong sukli."

Participant 26, Grade 6:

"Sa pagsukat po, naiisip ko na ginagamit din pala iyon kapag gumagawa o nag-aayos ng mga bagay."

Participant 27, Grade 5:

These responses would suggest a shift from perceiving mathematics as **school knowledge** toward understanding it as **usable knowledge**.

This distinction is important. Learners may memorize mathematical procedures without recognizing situations in which those procedures are useful. Contextualized learning can potentially help learners develop the capacity to identify mathematical relationships in everyday situations.

This can be represented as:

Classroom Mathematics → Contextualized Experience → Recognition of Real-Life Application → Functional Mathematical Understanding

Such recognition may also strengthen motivation. Learners who understand why a concept matters may have a stronger reason to engage with it.

Theme 7. Familiar Does Not Always Mean Easy: The Limits of Contextualization

An important critical theme should also be considered. Not all contextualized problems will necessarily make mathematics easier. Some learners may find the additional information in contextualized problems confusing, while others may be unfamiliar with the supposedly "familiar" situations selected by the teacher.

Illustrative Participant Responses

Participant 28, Grade 6:

"Minsan po mahaba iyong story kaya hindi ko alam kung alin doon iyong gagamitin."

Participant 29, Grade 5:

"May example po na hindi ko pa nagagawa kaya hindi ko rin agad naintindihan."

Participant 30, Grade 6:

"Mas madali po minsan kapag diretso na iyong numbers, lalo na kapag alam ko na iyong operation."

Participant 31, Grade 5:

"Kapag maraming information, akala ko po lahat kailangan gamitin."

These accounts would provide an important qualification to the positive potential of contextualized learning: contextualization is not inherently effective simply because a problem is presented as a real-life situation.

A context that is familiar to one learner may be unfamiliar to another. Similarly, adding a lengthy story to a mathematical exercise may increase cognitive demand without improving conceptual understanding.

This theme provides a more balanced interpretation of contextualized learning. It prevents the study from assuming beforehand that all learner experiences must be positive.

Essence of the Lived Experience

From a phenomenological perspective, the central essence that may eventually emerge from learners' accounts can be expressed provisionally as:

"Mathematics becomes more understandable and personally meaningful when learners can begin with experiences they recognize, explore mathematical relationships through interaction and struggle, and gradually discover that they are capable of solving problems independently."

This essence reflects a movement **beyond numbers**. The experience is not limited to obtaining correct numerical answers. It encompasses recognizing mathematics in lived situations, learning to interpret problems, navigating uncertainty, communicating mathematical ideas, learning from mistakes, and developing confidence.

Thus, contextualized mathematical problem-solving may be understood as a process of transforming lived experience into mathematical meaning and mathematical meaning into learner agency.

Implications for Mathematics Teaching

The proposed themes point to several instructional implications. Contextualized mathematics should not merely attach local names or familiar objects to conventional exercises. Teachers should select contexts that genuinely help learners understand the mathematical relationship being studied.

Learners should also be given opportunities to explain why they selected an operation or strategy rather than being evaluated solely on whether the final answer is correct. Classroom discussions can allow learners to compare multiple approaches and recognize that mathematical reasoning may follow different valid pathways.

Mistakes should likewise be used diagnostically. When a learner produces an incorrect answer, the teacher can investigate whether the difficulty originated from misunderstanding the situation, identifying irrelevant information, selecting the wrong operation, performing the computation incorrectly, or failing to evaluate the reasonableness of the answer.

Finally, contextualization should remain responsive to learner diversity. What adults consider "familiar" should not automatically be assumed to reflect every child's experience. Learners themselves can be invited to suggest situations from home, school, and community life that they associate with particular mathematical concepts.

In this way, mathematics instruction becomes not simply the teaching of procedures but the development of learners who can recognize, interpret, reason through, communicate about, and solve mathematical problems within the world they actually experience.

7. Conclusion

Mathematical competence cannot be understood entirely through scores and correct answers. Behind every solution is a learner interpreting language, connecting ideas with experience, selecting strategies, responding to difficulty, interacting with others, and developing beliefs about what mathematics means and whether they are capable of doing it.

By investigating the lived experiences of Grade 5 and Grade 6 learners at Camandag Elementary School, this study seeks to understand mathematical problem-solving **beyond numbers**. Contextualized learning may provide a bridge between abstract mathematical knowledge and children's everyday worlds, but the significance of that bridge can best be understood by listening carefully to the learners who cross it.

A phenomenological account of their experiences can therefore contribute to a more learner-centered and context-responsive approach to mathematics education—one in which mathematical problem-solving is not merely about obtaining the correct answer, but about developing meaning, reasoning, confidence, and the capacity to recognize mathematics as part of lived experience.

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