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ANALYSIS OF DETERMINANTS OF LITERACY AND NUMERACY ACHIEVEMENTS OF ELEMENTARY SCHOOL STUDENTS: A CASE STUDY BASED ON EDUCATION REPORTS AT SDN 2 MANGGARMAS

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ABSTRACT
This research was motivated by the low cognitive reasoning abilities of elementary school students, despite an upward trend in administrative scores. This study aimed to analyze the determinants of literacy and numeracy achievement at SDN 2 Manggarmas through Education Report Card data. Using a descriptive qualitative case study method, data were collected through triangulation of the 2024–2025 Education Report Card documents, interviews, and observations. The main findings showed a significant increase in numeracy scores of 23.62 points (reaching 84.98) and the successful elimination of 0% of students below the standard. However, a substantial Cognitive Gap was found between the ability to know (89.13) and reason (74.60), as well as disparities in the geometry domain (77.93). It was concluded that while adaptive instructional leadership successfully drove quantitative improvement, a deeper pedagogical transformation is needed to hone the depth of students' reasoning (L3).

INTRODUCTION

Basic education currently faces significant challenges in ensuring foundational competencies, particularly literacy and numeracy. International reports indicate that "poverty learning" has worsened post-pandemic, necessitating a thorough evaluation of the effectiveness of school-level systems. Grewenig et al. (2021) stated that school closures have widened the achievement gap for students from different socioeconomic backgrounds, particularly in basic cognitive skills.

There is a significant gap between literacy and numeracy improvement strategies in urban areas and rural/coastal areas, such as SDN 2 Manggarmas. In urban areas, character management is supported by a stable ecosystem, but in rural areas, this management is far more challenging. The unique backgrounds of farming/laboring families—who often have seasonal work patterns and limited parent-child interaction due to economic factors—create

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the need for specific school management models. A "one-size-fits-all" strategy often fails because it ignores these local sociocultural determinants (Mulyati, 2022). Parental involvement in numeracy activities at home remains a strong determinant (Hansen et al., 2021), but requires a different approach than in urban communities.

Indonesia addresses this challenge through the Education Report (IRB) for the Identification, Reflection, and Improvement (IRR) process. This platform enables principals to implement precise interventions (Susanti & Syam, 2023). As instructional leaders, principals must be able to transform the academic climate and teacher professionalism (Hallinger & Murphy, 2022). Adaptive leadership styles have been shown to be positively correlated with teacher self-efficacy in teaching literacy (Prasojo et al., 2022). In addition to managerial skills, teacher resilience and social-emotional competencies are key. Teachers with an "Active-Instructional" emotional profile are more consistent in supporting students with low literacy skills (Jennings et al., 2023; Sutiyati et al., 2024).

The 2024-2025 SDN 2 Manggarmas Education Report Card data shows a sharp anomaly. Although numeracy scores jumped (from 61.36 to 84.98), there is a cognitive gap between Knowledge/L1 (89.13) and Reasoning/L3 (74.6). Students are trapped in routine procedures without a deep understanding of concepts (Bakker, 2022). Furthermore, there is a domain disparity: Algebra and Number (88.25) are growing rapidly, but Geometry (77.93) is lagging far behind. This indicates limited teacher pedagogical competence in teaching abstract concepts such as spatial visualization (Widodo, 2023).

The drastic increase in the proportion of students above the minimum competency (up 44.55%) raises the question: is this a permanent change in learning culture or simply an adaptation of assessment patterns? Strengthening teacher agency is needed (Lestari, 2023) and implementing systematic scaffolding to bridge student difficulties at higher cognitive levels (Bakker, 2022).

This research is crucial for deconstructing Education Report Card data at the micro level, addressing the scarcity of studies linking internal school dynamics to score fluctuations in specific regions (Nugroho, 2024). Through this determinant analysis, it is hoped that a Determinant Solution Model will emerge that can bridge the gap between procedural and reasoning skills, while also integrating digital literacy as an opportunity to accelerate 21st-century competencies (Smith, 2023).

METHOD

This study uses a qualitative approach with a Descriptive Case Study design. This design was chosen because the researcher wanted to conduct an in-depth exploration of the phenomenon of the "Competency Leap" in literacy and numeracy at SDN 2 Manggarmas. This approach allows researchers to answer the questions "how" and "why" certain factors determine literacy and numeracy achievement in a real context. This study was conducted at SDN 2 Manggarmas. Informants were selected using the Purposive Sampling technique to ensure the data obtained were rich in information. Key informants included the Principal, Class Teachers (6 People), Education Report Card Operator (1 person), and Students (4 people). To ensure data validity (trustworthiness), this study applied Triangulation Techniques. The data collection techniques used were Documentation Study (an in-depth analysis of the 2024 and 2025 Education Report Dashboard documents and Data-Driven Planning), In-Depth Interviews (using semi-structured interview guidelines focused on literacy and numeracy improvement strategies), and Participatory Observation (observing the school safety climate and classroom learning processes to see the actual implementation of numeracy strategies). The main instrument in qualitative research is the researcher themselves (human instrument). Supporting instruments include an analysis rubric for the Education Report document and an interview protocol that has been validated by experts (expert assessment). Data were analyzed using an Interactive Analysis model that includes three simultaneous activity flows: Data Reduction, Data Presentation (Data Display), and Conclusion Drawing/Verification. The credibility of the research results was guaranteed through technical Triangulation by means of Extensive Observation (to understand the overall school culture), Member Checking (reconfirming findings with the principal and teachers to avoid researcher subjectivity), and Audit Trail (documenting the entire research process systematically so that it can be traced by other researchers).

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RESULTS AND DISCUSSION

Results

(bebarapa teori masih dikaitkan karena menjadi bagian dari rangkaian pijakan hasil menuju temuan)

Interview data analysis was conducted to examine the determinants behind fluctuations in literacy and numeracy scores. Key informants included the Principal (KS), Class Teachers (GK), and student representatives. The Principal revealed that the spike in literacy scores was driven by a 15-minute literacy strengthening policy before class and the optimization of reading corners in each classroom. This policy, implemented at the school, fosters a love and attention to texts among children. Teachers assist students in reading non-textbooks to build habituation. This is supported by the Class Teacher's statement, which emphasized the use of guided reading methods in small groups based on reading ability, allowing for more precise interventions. Despite improvements in basic reading skills, interviews revealed challenges at the higher literacy level. Teachers acknowledged that students still struggle to draw inferences and evaluate complex texts. A summary and findings of the Literacy interviews are presented in Table 1.

Table 1. Summary of Literacy Interview Results

Dimensions	Education Report Card Data	Interview Findings	Conclusion
Basic Literacy	High/Improved Score	The 15-minute habituation and guided reading sessions were effective.	Valid: The improvement is structural.
Critical Literacy	Low L3 (Reasoning) Score	Students struggled with inferential texts; teachers focused on reading fluency.	Valid: There is procedural bias in teaching.
Learning Media	High ICT Use	Teachers actively accessed the PMM for literacy modules.	Valid: Digitization supports the material input process.

Source: Primary Data from Interviews, Observations, and Document Review (processed 2025)

An interview with the principal of SDN 2 Manggarmas revealed that this score surge was the result of a stringent Data-Based Planning (PBD) policy implemented in late 2024. The school reviewed the 2024 Education Report Card and recognized that numeracy was a weak point. The principal instructed teachers to integrate concrete teaching aids into every math session and required literacy-numeracy-based practice questions every morning before class (Morning Numeracy). An interview with the Senior Grade Teacher revealed the reasons behind the low Reasoning Competency (L3) score, which was only 74.6, significantly below L1. Students were very quick when asked to calculate (L1), but when given story problems requiring in-depth analysis or problems combining two concepts (L3), they often became confused. Classroom learning still lacked the application of HOTS (Higher Order Thinking Skills) practice questions because they were still catching up on the basic material.

Participatory observation was conducted through environmental observations and literacy practices during the learning process and monitoring the school ecosystem to identify physical and pedagogical determinants of literacy achievement. Observations indicate that SDN 2 Manggarmas has strived to create a text-rich environment. Each classroom (Grades I-VI) has a Reading Corner featuring a collection of storybooks, mini wall magazines, and educational posters. Labeled classroom objects and displays of student writing dominate the walls of the lower grades (Grades I-III). This creates visual stimulation that supports constant letter and word recognition. This situation confirms Mulyati's (2022) finding that a physical environment that stimulates literacy in rural/suburban schools is highly effective in building the foundations of early literacy.

During classroom observations, it was found that teachers consistently implemented the "15 Minutes of Reading" ritual before beginning core material. Teachers employed read-aloud techniques in lower grades and guided independent reading in upper grades. Most students demonstrated high enthusiasm when reading narrative texts (folktales/fables), but their reading speed and comprehension began to slow when confronted with informational texts or complex procedural instructions. This practice reinforces the Education Report Card data, which indicates good

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basic literacy scores, but aligns with Bakker's (2022) theory regarding the need for further support (scaffolding) when moving to more abstract texts.

Observations during group discussion sessions revealed barriers to higher-level literacy. When asked open-ended questions requiring analysis, students tended to provide literal answers that stuck to the text (copying sentences from textbooks). Students often struggled to connect the text's content to personal experiences or contexts outside of school. This finding visually validates the "Cognitive Gap" identified in the Education Report Card, where reasoning skills (L3) remained below knowing skills (L1). Researchers observed the use of projectors in several classrooms to display digital storybooks from the PMM or Literacy Cloud platforms. The use of this digital visual media significantly improved student focus compared to conventional printed textbooks with minimal color illustrations. This digital literacy integration is a technical determinant supporting the jump in school literacy scores (Smith, 2023). A further summary of the Literacy observations can be seen in Table 2.

Table 2. Summary of Literacy Observations

Observation Aspect	Observation Aspect	Link to Education Report Card
Reading Culture	Reading Culture	Supports an increase in overall literacy scores.
Text Quality	Text Quality	Reading literacy scores are high, but information literacy is moderate.
Cognitive Response	Cognitive Response	This is in line with the very high L1 (Knowing) score.
Analytical Skills	Analytical Skills	This is in line with the still low L3 (Reasoning) score (74.6).

Source: Primary Data from Interviews, Observations, and Document Review (processed 2025)

Based on the analysis of the 2025 Education Report document, SDN 2 Manggarmas successfully achieved a score of 84.98 (Good), a sharp increase of 23.62 points from the previous year (61.36). Quantitatively, 100% of students have achieved minimum competency. However, observation results show that this increase is more dominated by mastery of routine procedures in the Number Domain (88.25). Observations in teaching and learning activities (KBM) show that teachers tend to use the drill method (repeated practice questions) for basic arithmetic topics. Students are very skilled in mixed arithmetic operations, which explains why the L1 (Knowing) score is very high (89.13). During classroom observations in Mathematics, students experienced obstacles when given story problems that require multi-step analysis or data interpretation (HOTS questions). Teachers still struggled to provide appropriate scaffolding to build students' critical thinking logic. This indicates a wide cognitive gap. The L3 (Reasoning) score only reached 74.6, 14.53 points behind L1. The Education Report Card data shows that the Geometry domain (77.93) is the lowest. Interviews and observations revealed that this domain receives less time than the Number domain. Observations found that manipulative learning media (such as geometric figures) at SDN 2 Manggarmas are still limited in their use. Geometry learning focuses more on theory (memorizing area/volume formulas) than on spatial exploration.

The overall increase in numeracy scores was also influenced by improvements in the School Safety Climate, which was recorded as stable in the Education Report Card. The principal has implemented a "Numeracy Saturday" policy and conducts regular academic supervision. This has increased teacher motivation to explore new teaching methods, although the focus remains on achieving administrative targets in the Education Report Card. A summary of Numeracy Observations can be seen in Table 3.

Table 3. Summary of Numeracy Observations

Indicators	Quantitative Findings (2025)	Observational Reality (Qualitative)
Number Domain	88.25 (Highest)	Focus on drilling and routine arithmetic.
Reasoning Level (L3)	74.6 (Lowest)	Students struggle with word problems/HOTS.
Geometry Domain	77.93	Limited teaching aids and instructional time.
Knowledge Level (L1)	89,13	Memorization of concepts and formulas is very good.

Source: Primary Data from Interviews, Observations, and Document Review (processed 2025)

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The achievement of "Good" numeracy at SDN 2 Manggarmas represents a transitional success. The school has successfully overcome the "numeracy blind" phase, but now faces a significant challenge in improving the quality of depth of thinking (L3). Future strategies must shift from drilling to problem-based learning.

Document analysis focused on the 2024–2025 Education Report Card, Data-Based Planning Documents (PBD), and teacher teaching modules to identify determinants of literacy achievement.

Based on the 2025 Education Report Card, literacy skills at SDN 2 Manggarmas showed a significant positive trend. The literacy score reached 82.45 (Good category), an increase of 18.30 points from the previous year. The document review revealed a progressive shift in distribution. The group of students in the "Achieving Minimum Competency" category increased by 38.20%, while the group "Needing Special Intervention" was successfully reduced to nearly 0%. This success indicates that the school's PBD document has been implemented with a focus on standardizing basic literacy skills (in line with Pratiwi, 2021). A closer look at the literacy sub-competencies revealed an asymmetry in cognitive quality. Retrieve (86.15) was the highest score in the literacy profile. The document indicates students are highly proficient in identifying explicit facts in texts. Interpretation and integration (78.40) scored at a moderate level. Students are beginning to be able to form simple inferences. Evaluation and reflection (68.90) was the lowest score. The Education Report Card document marked this area as "Needs Strengthening." There is a 17.25-point gap between the ability to find information (L1) and evaluate text (L3). This demonstrates that although students are "fluent readers," they are not yet fully "critical readers" (in line with Utami, 2022).

A review of the 2024/2025 PBD documents indicates that increased literacy is the result of two main budget-documented programs: Library Collection Procurement and PMM Utilization. However, a review of teacher Teaching Modules (RPPs) indicates that the assessment instruments used are still dominated by memory-based questions (Lower Order Thinking Skills). There has been no integration of multimodal text-based questions or complex information texts adequate to train L3 skills (in line with Lestari, 2023). The Education Report Card also records very high scores for School Safety Climate and Diversity (above 85). Theoretically, a safe and inclusive school environment is an enabling factor that facilitates the internalization of a culture of literacy in suburban schools (Zahra, 2022). A summary of the findings from the Literacy Document Review can be seen in Table 4.

Table 4. Summary of Literacy Document Review

Literacy Aspect	Score/Status	Critical Findings
General Achievement	82.45 (Good)	Very strong quantitative increase (+18.30).
Highest Sub-Competency	Finding Information	Proficient in textual/explicit aspects.
Lowest Sub-Competency	Evaluation & Reflection	Weak in critical/implicit analysis (L3).
Teacher Instruments	Dominant LOTS	Assessment does not support reasoning skills.

Source: Primary Data from Interviews, Observations, and Document Review (processed 2025)

The 2025 Education Report document review shows that SDN 2 Manggarmas has successfully achieved "Good" status (100%) in numeracy skills. The most significant transformation is seen in the shift in student competency distribution. In 2024, only 45.45% of students were above the minimum competency. However, in 2025, this figure jumped drastically by 44.55% to 90.00%. The school successfully eliminated the "Below Minimum Competency" category from 9.09% to 0.00%. This demonstrates the effectiveness of the remediation or basic intervention program implemented by the school over the past year. The Education Report document details achievements by content domain. The analysis results show uneven (asymmetric) performance across domains, as shown in Table 5.

Table 5 Numeracy achievements in 2025

Domain	2025 Score	Upgrade	Status
Numbers	88,25	+25,80	Very High
Algebra	81,32	+27,38	High

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Data and Uncertainty	87,88	+16,38	Very High
Geometry	77,93	+20,48	Moderate

Source: Primary Data Review (processed 2025)

Low geometry scores compared to other domains are often correlated with the lack of use of visual aids in learning and limited spatial literacy. Document review revealed a significant gap in students' thinking depth. A descending cognitive hierarchy pattern was observed: L1 (Knowing), with a score of 89.13, showed students were highly proficient in remembering basic formulas and procedures; L2 (Applying), with a score of 83.8, showed students were able to use procedures in clear contexts; and L3 (Reasoning), with a score of 74.6, showed a significant decline in performance when faced with problems requiring analysis, synthesis, and evaluation (HOTS). This demonstrates a gap between memory (L1) and reasoning (L3). This suggests that learning at SDN 2 Manggarmas still tends toward procedural fluency rather than conceptual understanding.

Based on the school's PBD document, it was found that the spike in numeracy scores (A.2 increased by 23.62) was closely related to the policy of utilizing digital platforms and intensifying teacher training in the 2024/2025 academic year. However, the strategies outlined in the school work plan (RKS) are still dominated by results-focused drills, rather than developing higher-order reasoning processes.

This study employed technical triangulation to ensure that the analysis of the determinants of literacy and numeracy achievement at SDN 2 Manggarmas was objective and free from researcher bias. The researchers cross-checked quantitative data from the Education Report Card with qualitative data obtained through interviews and observations, as shown in Table 6.

Table 6. Results and Findings of Technical Triangulation

Report Card Data Findings	Teacher Interview Results	Classroom Observation Results	Triangulation Conclusion
Low Geometry Score (77.93)	Teachers acknowledged a lack of visual aids for geometric shapes.	Geometry learning still predominantly uses textbooks (2D).	Valid: The gap is caused by media limitations (instrumental determinant).
Low L3 Reasoning Score (74.6)	Students are accustomed to memorizing formulas, rather than story-based/hot-listed problems.	Daily practice does not yet integrate complex problem-based questions.	Valid: The gap is caused by pedagogical patterns (instructional determinant).

Source: Primary Data from Interviews, Observations, and Document Review (processed 2025)

Discussion

The results of the literacy analysis align with Utami (2022), who stated that process-focused interventions (assessment for learning) are highly effective in mapping basic literacy development. Although basic reading skills improved, interviews revealed challenges at higher levels of literacy. Teachers acknowledged that students still struggled to draw inferences and evaluate complex texts. This explains the "Cognitive Gap" in the Education Report Card data between the L1 (Knowing) and L3 (Reasoning) levels. As emphasized by Lestari (2023), teacher agency is needed to design more cognitively challenging materials.

The use of the Merdeka Mengajar (PMM) platform is a significant technical determinant. Teachers use literacy modules in the PMM to enrich teaching resources. Digital transformation in elementary schools, when used as a knowledge construction tool, can accelerate literacy achievement (Smith, 2023). This leadership strategy aligns with the findings of Hallinger & Murphy (2022) that the active involvement of principals in setting instructional standards directly correlates with improved standardized assessment scores. However, the principal's focus still tends to be on "meeting the target score" on the Education Report Card.

Regarding the low Geometry Domain score (77.93), teachers explained that there were limitations in learning media, particularly visualization of three-dimensional shapes, which made it difficult for students to visualize abstract

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concepts. This finding confirms the "Empirical Gap" discussed previously. There is a tendency toward "Teaching to the Test," where learning focuses more on question patterns that frequently appear in assessments (L1 and L2) rather than developing reasoning skills (L3). This is supported by Widodo's (2023) opinion that teachers' limited Pedagogical Content Knowledge (PCK) in certain domains (such as geometry) will directly impact scores in those specific domains.

Other findings identified through interviews and observations identified three key determinants at SDN 2 Manggarmas: Managerial Determinants (Effective Morning Numeracy and PBD policies boosted the number of competency completions), Pedagogical Determinants (Lack of integrated scaffolding strategies at higher cognitive levels resulted in stagnation in reasoning skills), and Facility Determinants (Limited manipulative teaching aids for geometry hampered students' spatial visualization). The gap between administrative numbers and cognitive depth is often caused by a management focus that is heavier on 'end results' than on the reasoning process (Nugroho, 2024).

In general, the positive findings of this study include: 1) Quantum Leap in Numeracy; an increase in A.2 scores of 23.62 points (from 61.36 to 84.98); 2) Elimination of Vulnerable Groups; Success in eliminating (0%) students below minimum competency; 3) Dominance of the Number Domain; Achieving a score of 88.25 indicates a very solid mastery of arithmetic foundations. However, there are quality gaps that include Reasoning Stagnation (L3); L3 scores (74.6) are far below L1 (89.13), indicating that learning has not yet touched HOTS; Geometry Weaknesses; Geometry domain scores (77.93) are the lowest, indicating limited spatial visualization; and Procedural Bias; School strategies are still stuck on question drills rather than in-depth conceptual understanding.

These findings are relevant to several supporting studies, such as Hadi et al.'s (2022) study, which found that the use of digital platforms accelerates quantitative score increases, but often fails to improve reasoning depth if not accompanied by appropriate scaffolding. (Supporting the negative findings on L3). Suburban schools show a pattern of significant improvement in the number domain, but tend to stagnate in geometry due to limited teaching aids. This supports the negative findings on geometry (Pratama & Handayani, 2023). Furthermore, Nguyen (2024) found that strengthening reasoning skills (L3) requires metacognitive interventions that go beyond routine practice problems. (Strengthening the argument about L3 weaknesses at SDN 2 Manggarmas).

Effective PBD can eliminate students below minimum competency through precise resource allocation. This makes teacher instructional resilience a key determinant in maintaining the upward trend in numeracy scores in rural schools (Wahyuni et al., 2022; Chen & Wong, 2021). Teachers often focus on "passing the Minimum Competency Standards" (KKM), neglecting the reasoning domain, which is considered too difficult for students (Fauzi, 2023). Therefore, to ensure a score jump of more than 20 points in a single year, triangulation of classroom activities is necessary to ensure it is not simply due to instrument bias (Smith et al., 2024). Comparing the findings from SDN 2 Manggarmas with the seven studies mentioned above reveals a "Typical Transitional Transformation" phenomenon. Administratively and quantitatively, the school is very successful (in line with Wahyuni, 2022), but pedagogically, the school remains stuck at a low cognitive level (in line with Hadi, 2022 and Fauzi, 2023). This provides a policy opportunity for the school to shift from "Data-Driven Results" to "Data-Driven Pedagogical Transformation."

These research findings confirm that SDN 2 Manggarmas is in the Transitional Transformation phase. Schools have successfully passed the critical stage of basic literacy and numeracy (eliminating 0% of students below standard), but now face a quality barrier in reasoning and geometry. To overcome this barrier, the proposed solution model is a shift from Administrative Data-Based Planning to Pedagogical Transformation-Based Planning. Schools should not simply evaluate "how scores have improved," but rather begin to ask "how students reason." Integrating Educational Report Card data with strengthening teachers' Social-Emotional Competencies (KSE) is expected to create a more inclusive and cognitively challenging learning environment.

The "Cognitive Gap" findings at SDN 2 Manggarmas offer a framework called the Data-Based Pedagogical Transformation Solution Model (TPBD). This model shifts the school's focus from simply "chasing report card scores" to "deepening the quality of thinking." The first solution to address low L3 scores is the implementation of systematic scaffolding. Teachers no longer simply provide formulas (procedures), but guide students through the process of asking "why" and "how." At SDN 2 Manggarmas, this was realized through a transition from simple multiple-choice

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questions to contextual problem-based story problems. This is in line with the findings of Kim & Lee (2022) that providing appropriate metacognitive scaffolding in basic mathematics learning has been shown to improve students' higher-order reasoning abilities by up to 25% compared to conventional methods. To address the disparity in the Geometry Domain (77.93), this solution model offers visual-spatial integration in every subject. Geometry is not taught as memorization of area and perimeter formulas, but rather through design projects or mapping of the school environment. This aims to bring abstract geometric concepts closer to students' physical reality. Miller, et al. (2023) showed that strengthening spatial reasoning from an early age is a major determinant that mitigates students' difficulties in understanding the domains of geometry and algebra at an advanced level.

The various obstacles and negative findings in literacy and numeracy demonstrate the strong role of principal leadership. The resulting solution model requires principals to shift from results-oriented administrative leadership to Adaptive Instructional Leadership. Principals must facilitate teacher learning communities to discuss pedagogical obstacles at the L3 level, rather than simply evaluating quantitative improvements in Education Report Card scores. This aligns with the findings of Robinson & Gray (2021), who stated that leadership focused on developing teachers' pedagogical capacity has a direct impact three times greater than administrative leadership on student learning outcomes.

Given that the surge in numeracy scores at SDN 2 Manggarmas was driven by the hard work of teachers, this solution model emphasizes the importance of maintaining teacher resilience and social-emotional competencies (SSE). Teachers who feel emotionally supported will be more willing to experiment with HOTS teaching methods that risk initial failure, rather than continuing to play it safe with drill-based methods. Teacher resilience serves as a buffer that maintains high instructional quality even in schools with limited resources (Santos et al., 2024).

The increase in literacy and numeracy scores at SDN 2 Manggarmas, aided by digital platforms for conceptual exploration, is still not optimal. The use of geometry simulation applications, for example, helps bridge the gap in geometry, which has historically been low due to limited physical teaching aids. Digital tools are used as 'mind tools' that facilitate knowledge construction, rather than simply one-way content delivery devices, supporting authentic assessment for learning. This is in line with the findings of Zhao et al. (2021); Black & Wiliam (2021). Disparities in suburban schools are often influenced by the home environment. This solution model involves parents through the delivery of simplified Education Report Card data, so parents understand that their support is needed not only for "children to be able to count" but also "children to be able to reason." Epstein & Sheldon (2022) demonstrated that strong collaboration between home and school in specific literacy and numeracy domains can consistently improve student academic scores in rural areas.

CONCLUSION

Research at SDN 2 Manggarmas concluded that educational transformation at the grassroots level has achieved a quantitative leap, but still faces qualitative challenges at the higher cognitive level. Literacy and Numeracy achievements saw a significant increase in Basic Literacy (82.45) and Numeracy (84.98) with a jump of 23.62 points in one annual cycle (2024-2025). Managerially, the 15-minute reading habit program and optimization of reading corners proved effective in eliminating 100% of students below the minimum competency standard. A sharp gap was found between the ability to find information (L1/86.15) and the ability to evaluate and reflect (68.90). This indicates that the current intervention has only reached the "reading fluency" stage, but has not yet reached the "critical reader" stage capable of inferential analysis. Key factors for this success are adaptive instructional leadership through Data-Based Planning (DBS), the use of the Freedom to Teach Platform (PMM), and the creation of a safe learning environment (safety climate >85) that provides a psychological foundation for student engagement.

Practical policy recommendations to bridge the gap between procedural skills (LOTS) and reasoning skills (HOTS) include: First, Curriculum and Budget Synergy (BOS/PBD Funds): Shifting the budget focus from providing physical textbooks to HOTS-based formative assessment design training. Schools should require each teacher to produce one literacy-numeracy project module per semester, which is uploaded to PMM as evidence of concrete action. Second, Implementation of Metacognitive Scaffolding: Teachers no longer simply provide text, but are

required to use "Graphic Organizers" (such as fishbone diagrams or concept maps) in each literacy session to force students to conduct in-depth analysis of the text's structure, rather than simply seeking explicit answers. Third, Rural/Suburban Synergy through the formation of "Independent Literacy Associations." The form of synergy: Schools lend "Suburban Literacy Packages" (picture books and concrete math props) that students take home, and parents simply initial the borrowing journal as a simple form of social control without having to teach academic material directly. Fourth, Strengthening Spatial Literacy: Addressing low geometry domain scores by requiring the use of manipulative media (physical props) or digital simulations during math lessons, in order to change the teaching method from simply memorizing area formulas to visualizing space. The principal supervises classes not for administrative inspection, but through "Peer-Observation", where teachers observe each other's way of giving provocative questions (L3) to students during the learning process.

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