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Evaluating the Minimum Competency Assessment (AKM) Program for educational quality assurance: A CIPP model case study at an Indonesian public elementary school

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Abstract:

This study evaluates the implementation of Indonesia's Minimum Competency Assessment (*Asesmen Kompetensi Minimum*, AKM) program as an instrument of educational quality assurance at elementary school, using Stufflebeam's Context, Input, Process, Product (CIPP) evaluation model. A qualitative evaluative design was employed, involving 22 participants: the school principal, five grade-five teachers, one school operator, and fifteen grade-five students. Data were collected through in-depth interviews, participatory observation, and documentation review, and were analyzed using the interactive model of Miles, Huberman, and Saldaña (data reduction, data display, and conclusion drawing/verification), with credibility established through source, method, and time triangulation and member checking. The findings show that: (1) the contextual conditions were favourable, marked by accurate stakeholder understanding of AKM as a diagnostic tool, an active school literacy culture, and supportive policy and environmental conditions; (2) input readiness was adequate, reflected in collaborative instructional leadership, sufficient computer-based national assessment infrastructure, a sustained long-term preparation strategy, and full (100%) participant attendance; (3) the implementation process complied with national procedures, supported by effective team coordination, responsive handling of technical constraints, and a documented culture of post-assessment reflection; and (4) the resulting outcomes indicate a positive contribution to quality assurance, with 73.33% of students reaching the proficient/advanced level in reading literacy and 76.67% in numeracy, surpassing the school's revised target of 70% (raised from a baseline of 60%). AKM results were actively used to inform remedial teaching, differentiated instruction, and data-based school planning. The study underscores the importance of strengthening teachers' data-analysis capacity and transforming contextual literacy and numeracy pedagogy as priorities for continuous improvement.

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Introduction (مقدمة)

One of the central instruments supporting this quality-assurance agenda in Indonesia is the Minimum Competency Assessment (Asesmen Kompetensi Minimum, AKM), introduced in 2021 by the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) as part of the broader National Assessment that replaced the Ujian Nasional (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2021). Rather than testing mastery of subject content, AKM measures two foundational competencies considered prerequisites for lifelong learning: reading literacy and numeracy, the capacity to reason using mathematical concepts in contexts relevant to everyday life. Results are reported through the Rapor Pendidikan (Education Report Card) at four proficiency levels (below basic, basic, proficient, and advanced) and are intended to function diagnostically rather than as a basis for student promotion or high-stakes ranking.

National-level data from the Education Assessment Center (Pusmendik) illustrate a gradual, though uneven, improvement over the program's first three years (Table 1). In 2021, 28% of elementary students scored below the minimum competency level in reading literacy and 34% in numeracy. By 2022, following targeted literacy and numeracy strengthening, the proportion of students reaching the minimum competency level increased by 6.3 percentage points in literacy and 5.1 points in numeracy. In 2023, 74% of elementary schools reported using AKM results for instructional reflection, yet a persistent urban-rural achievement gap of roughly 30 points remained (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2022; Pusat Asesmen Pendidikan, 2023; Badan Penelitian dan Pengembangan dan Perbukuan, 2024).

Table 1. National AKM Achievement Trends, 2021–2023

Year	Aspect	Key National Outcome	Notes
2021	Reading literacy	28% of elementary students below minimum competency (mean category: Sufficient, level 3 of 6)	First national implementation; substantial technical and conceptual difficulties with computer-based assessment
2021	Numeracy	34% of elementary students below minimum competency	Numeracy mastery lower than literacy; schools still focused on content-based testing
2022	Reading literacy	6.3 percentage-point increase in students reaching minimum competency	Teacher training and literacy-based instruction strengthened; schools began using AKM results for improvement
2022	Numeracy	5.1 percentage-point increase in students reaching minimum competency	Reflective use of AKM results began in most urban elementary schools
2023	Reading literacy	74% of schools used AKM results for instructional reflection	Improved equity across provinces, but a ~30-point urban-rural gap remained

Year	Aspect	Key National Outcome	Notes
2023	Numeracy	Mean scores increased across 27 provinces	Contextualized numeracy strengthening still required at the elementary level

Source: Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi (2022); Pusat Asesmen Pendidikan (2023); Badan Penelitian dan Pengembangan dan Perbukuan (2024).

Despite this encouraging national trajectory, AKM implementation at the school level continues to face substantial obstacles, as many schools have yet to fully grasp its concept, procedures, and instructional uses. SD Negeri Kunciran 4, a large public elementary school in Tangerang City with a relatively complete complement of teaching and administrative staff, exemplifies these challenges: students have shown limited proficiency with basic computer operations, and many were unaccustomed to reading extended digital texts or responding to computer-based items, producing confusion, technical difficulty, and test anxiety. Teachers, meanwhile, have not uniformly received adequate training on translating AKM results into instructional planning, so diagnostic data that should inform reflection and improvement often remains underutilized.

These field-level difficulties echo prior research: Sari and Sayekti (2022) found that elementary teachers struggle to interpret AKM results for data-driven lesson planning, Sanmarwi and Sulastris (2022) reported that AKM outcomes in DKI Jakarta remain underused for basic-education quality-improvement programs, and Nurwahidah, Iskandar, and Mulyati (2023) argued that AKM's value as a quality-evaluation instrument depends heavily on the strength of a school's internal quality-assurance system. Yet most existing evaluations of AKM examine isolated dimensions (Solekha, Purwati, & Nurkolis, 2024), individual teacher pedagogy (Nurwahidah et al., 2023), or technical implementation (Sari & Sayekti, 2022), rather than an integrated assessment spanning context, input, process, and product, despite comparable international systems such as Australia's NAPLAN, Peru's Evaluación Censal de Estudiantes, and England's Key Stage assessments having been evaluated more holistically through the CIPP framework (Davidson & Thompson, 2023; Diaz-Bazo & Flores-Kanter, 2024; Davies & Jenkins, 2022).

This study addresses that gap using Stufflebeam's CIPP (Context, Input, Process, Product) model, an evaluation framework that examines a program as a single, cyclical whole across four interrelated dimensions: context (the background, needs, and rationale underlying a program), input (the readiness of resources, strategies, and organizational arrangements mobilized to achieve its objectives), process (the fidelity of actual implementation relative to plan, including obstacles encountered and how these are addressed), and product (the outputs, impacts, and sustainability that culminate from the preceding three components) (Arikunto, 2020; Sugiyono, 2021; Stufflebeam & Shinkfield, 2018). Evaluation quality is further guided by the Joint Committee on Standards for Educational Evaluation's four standards which informed this study's ethical treatment of underage participants and its triangulated verification of data accuracy.

Within Indonesia's education system, quality assurance operates through an Internal Quality Assurance System requiring schools to sustain a continuous Planning–Implementation–Evaluation–Reporting–Follow-up (PPEPP) cycle, in which diagnostic data such as AKM results are expected to feed forward into subsequent planning rather than terminate at the reporting stage (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2021; Sekretaris Jenderal, 2022). Rahminawati (2021) characterizes a mature internal quality-assurance system as one in which data, planning, implementation, and evaluation form a continuously revolving cycle, and Wulandari and Mauludin (2024) demonstrate, in a vocational-school setting, that the extent to

which a school completes this full cycle is itself a meaningful indicator of quality-assurance maturity. This distinction between AKM as a compliance report and AKM as a functioning input within a continuous improvement cycle forms a central analytic lens for this study's evaluation of program outcomes.

Table 2 summarizes how these and other studies have evaluated AKM-type assessments and their relationship to quality assurance. Collectively, they confirm such instruments' diagnostic value, yet none evaluates an Indonesian public elementary school through all four CIPP components simultaneously, triangulated across the principal, teachers, operator, and students.

Table 2. Summary of related studies on AKM and CIPP-Based quality evaluation

Author(s) & Year	Context / Setting	Key Finding
Sanmarwi & Sulastri (2022)	DKI Jakarta primary schools	AKM functions as a diagnostic instrument for policy-level quality improvement but is not yet optimally utilized.
Solekha, Purwati, & Nurkolis (2024)	National policy level	AKM has become a reference point in national quality assurance and school accreditation.
Nurwahidah, Iskandar, & Mulyati (2023)	Elementary schools	AKM provides diagnostic data for teachers, but success depends on internal quality-assurance support.
Hidayat, Fauzia, & Hidayati (2023)	Madrasah Ibtidaiyah (AKMI)	A comparable competency assessment effectively identifies competency gaps for school quality decisions.
Wulandari & Mauludin (2024)	Vocational secondary school (CIPP)	Context, input, process, and product all support AKM as a diagnostic tool, though data use in the process stage remains constrained.
Davidson & Thompson (2023)	Australia, NAPLAN (CIPP)	Input reveals pedagogical gaps across regions; intensive proctor training enabled a successful paper-to-digital transition.
Diaz-Bazo & Flores-Kanter (2024)	Peru, elementary schools	Competency data collection functions effectively as formative feedback, prompting investment in teacher data-literacy training.
Davies & Jenkins (2022)	England, primary school networks	Higher-order-thinking item formats create cognitive strain when daily instruction remains rote-based.

This study addresses that gap by extending the CIPP application demonstrated by Wulandari and Mauludin (2024) at the vocational level, and the international CIPP evidence from Australia, Peru, and England (Davidson & Thompson, 2023; Diaz-Bazo & Flores-Kanter, 2024; Davies & Jenkins, 2022), to an Indonesian public elementary school. Specifically, it aims to (1) describe the contextual conditions underlying AKM implementation in relation to educational quality assurance, (2) evaluate the adequacy of human, infrastructural, and policy inputs supporting the program, (3) analyze the implementation process, including literacy-numeracy instructional strategies and the technical challenges encountered, and (4) assess the resulting literacy and numeracy outcomes and their contribution to the school's quality-assurance system.

By integrating all four CIPP components within a single, triangulated case, this study extends CIPP's application from the vocational and international contexts in which it has predominantly been used to the Indonesian public elementary school, and offers school principals, teachers, and district education offices a replicable template for auditing whether AKM results are genuinely reshaping instruction rather than merely being administered and

reported. For policymakers, the findings illustrate a concrete pathway through which a well-supported school can convert a compliance-oriented national policy into an internally owned improvement mechanism, offering a benchmark against which less-resourced schools' implementation gaps might be more precisely diagnosed.

Method (منهج)

This study employed a qualitative, descriptive-evaluative design grounded in a constructivist paradigm, in which the researcher sought to understand the meanings, experiences, and perceptions that participants construct around AKM implementation as part of the National Assessment policy (Sugiyono, 2021). Consistent with Arikunto's (2020) conception of evaluative research as a systematic process of determining a program's actual condition against predetermined criteria, the study adopted Stufflebeam's CIPP model for its capacity to provide a holistic account of program implementation, from contextual rationale through to ultimate outcomes. The research was naturalistic: the AKM implementation process was examined as it occurred, without manipulation of variables, and interpretive findings were accompanied by context-specific recommendations for strengthening the school's assessment system going forward. Figure 1 summarizes the evaluation design flow adopted for the study.



Figure 1. CIPP evaluation design flow adopted in this study

The CIPP model was selected over alternative evaluation frameworks, such as Tyler's goal-attainment model or Kirkpatrick's training-evaluation levels, because those models are oriented primarily toward measuring the achievement of predetermined objectives or reaction-to-training outcomes, whereas CIPP explicitly incorporates the contextual and input conditions that precede implementation, a fit particularly suited to evaluating AKM, whose effectiveness depends as much on school readiness and leadership as on the assessment's technical execution (Arikunto, 2020). Moreover, because CIPP treats evaluation as a continuous, decision-oriented process rather than a one-time judgment of success or failure, it is well suited to generating the kind of formative, improvement-focused recommendations that this study aims to provide to SD Negeri Kunciran 4 and comparable schools.

Research Setting

The study was conducted at SD Negeri Kunciran 4, a public elementary school located in Kelurahan Kunciran, Kecamatan Pinang, Tangerang City, Banten Province. Established in 1985 and accredited “A,” the school enrolls 778 students across grades I–VI and implements the Kurikulum Merdeka (Independent Curriculum). Data collection focused on the school’s implementation of AKM as part of its broader effort toward educational quality assurance. The research spanned six months (February–July 2026), encompassing preliminary study, instrument development, data collection, and analysis; the primary fieldwork was conducted in February and May 2026.

Following Creswell’s (2024) preference for the term “participant” over “respondent” to reflect meaningful, active involvement in the research process, 22 participants were purposively selected to represent the full range of stakeholders engaged in AKM implementation (Table 3). Because student participants were minors, their involvement required both parental consent and student assent, consistent with ethical protocols for research involving children; all participant names reported in this article are represented by initials to protect confidentiality.

Table 3. Research Participants

Participant Category	n	Role in the Study
School principal	1	Overall responsibility for planning, coordination, monitoring, and follow-up of AKM results for instructional-quality improvement.
Grade-five class teachers	5	Implementers who accompany students during the assessment and use AKM results to refine classroom instruction.
School operator	1	Responsible for technical administration of participant data, computer hardware, network, and the online assessment application.
Grade-five students	15	Direct assessment subjects, selected to represent a range of academic ability and gender.
Total	22	

Data Collection

Three techniques were used in combination to obtain a comprehensive and mutually corroborating picture of AKM implementation: (a) participatory observation, guided by a structured protocol organized around the four CIPP components and covering preparation, implementation, and follow-up of the assessment; (b) in-depth, semi-structured interviews with the principal, teachers, operator, and students, exploring their understanding, roles, and experiences across the four evaluation components; and (c) documentation review, encompassing school policy documents, meeting minutes, assessment infrastructure inventories, school budget realization reports, the Rapor Pendidikan, lesson plans, and follow-up program documents. Using multiple techniques allowed empirical claims made in interviews to be corroborated or qualified by observational and documentary evidence.

Data Analysis

Data were analyzed using the interactive qualitative analysis model of Miles, Huberman, and Saldāna (2020), comprising three iterative stages. Data reduction involved selecting, focusing, and simplifying raw field data according to four sets of indicators aligned with the CIPP components: (context) school policy, program objectives, and relevance to quality-improvement

needs; (input) readiness of human resources, infrastructure, and budgetary/policy support; (process) assessment implementation, teacher-training mechanisms, instructional strategies informed by AKM results, and obstacles encountered; and (product) assessment outcomes, their impact on literacy and numeracy, and their contribution to the school's quality-assurance system. Data display then organized the reduced data into narrative summaries, tables, and evaluation matrices to reveal patterns and relationships across components, and conclusion drawing/verification proceeded inductively, comparing the program's stated objectives against the empirical evidence obtained, to determine the overall effectiveness of AKM implementation and to formulate context-specific recommendations.

Data credibility was established through triangulation and member checking (Creswell, 2024; Ghani, 2024). Source triangulation compared accounts across the principal, teachers, operator, and students; method triangulation cross-checked findings from interviews, observation, and documentation; and time triangulation collected data at different points relative to the assessment (before, during, and after implementation) to verify the consistency of findings. Member checking was additionally conducted by inviting participants to confirm the researcher's interpretation of their statements.

Result (نتائج)

Findings indicate that stakeholders at SD Negeri Kunciran 4 held an accurate understanding of AKM's purpose. The principal, teachers, and operator consistently described AKM as an instrument for measuring foundational reading literacy and numeracy competencies rather than mastery of subject content – an understanding aligned with the national policy intent of positioning AKM as a school quality-mapping instrument rather than a graduation or ranking test. As the principal explained, AKM provided a genuine picture of students' critical thinking and problem-solving ability, being part of the National Assessment that replaced the Ujian Nasional and that focuses on the quality of learning rather than rote memorization.

“AKM is an assessment instrument aimed at measuring students' basic reading literacy and numeracy competencies, not merely content mastery. Through AKM, we obtain a real picture of students' critical thinking and problem-solving ability as provisions for life. I understand AKM as part of the National Assessment that replaced the National Examination, with a focus on the quality of learning rather than the memorization of material” (Principal, interview, May 12, 2026).

This understanding was observed in practice: teachers routinely used the terms “reading literacy” and “numeracy” in instructional discourse, the principal regularly reiterated AKM's importance during staff meetings, and the school displayed information related to its School Literacy Movement. Documentary evidence corroborated this shared understanding among staff, students, and parents.

Diagnostic-data needs were similarly well understood by school leadership: the principal recognized that, absent accurate data, instructional planning would remain merely assumptive, whereas AKM offered an objective picture of students' actual competency positions that enabled more precisely targeted instructional intervention. In terms of resources, the school possessed adequate computer facilities and internet connectivity to support computer-based assessment, adequate teacher competency in basic information-technology use, and consistent technical and managerial support from the principal and operator, supplemented by mentoring from district education supervisors. The main contextual challenge identified concerned teachers' capacity to analyze Rapor Pendidikan data in depth, an area the school has begun to address through continued assessment-related professional learning. Overall, the combination of accurate

stakeholder understanding, articulated diagnostic needs, adequate resource availability, and supportive policy and environmental conditions indicates that the contextual foundation for AKM implementation at SD Negeri Kunciran 4 was favourable for advancing educational quality assurance.

Input Evaluation

The school's input readiness for AKM implementation was found to be adequate across leadership, human resources, infrastructure, financing, and strategic-planning dimensions. The principal exercised an active, coordinative leadership style, forming a dedicated AKM team comprising the operator and grade-five teachers, coordinated through preparatory meetings, a WhatsApp group, and daily briefings prior to each assessment session. This pattern of collaborative leadership was reflected in an organizational chart posted on the school information board and in the visible coordination observed among the principal, operator, proctors, and accompanying teachers before each session.

Preparation of the assessment strategy began three months in advance, encompassing session scheduling, proctor and supervisor assignment, participant-list preparation, and parental coordination. Notably, student preparation was pursued as a sustained instructional strategy rather than short-term drilling: teachers reported integrating text-based and contextual items into daily formative assessment from the beginning of the semester.

"My strategy is routine integration, not last-minute drilling. Since the start of the semester, I have already incorporated text- and context-based items into daily evaluation. For numeracy, I frequently use contextual problems drawn from everyday life" (Grade V Teacher, interview, February 12, 2026).

This was corroborated by observed instructional materials embedding literacy- and numeracy-based items and by documented AKM practice modules, item banks, and simulation attendance records. Financing for AKM was sourced from the regular School Operational Assistance Fund, allocated through the School Budget and Activity Plan to cover computer maintenance, supplementary internet costs, and administrative needs, sufficient for operational requirements, though long-term hardware renewal remains an area for improvement. Program coverage extended to all 30 grade-five students across five class groups, with full (100%) attendance on the day of assessment, corroborated by attendance documentation.

Observation further confirmed that the school's computer laboratory, comprising 30 functioning units supported by stable internet connectivity, backup devices, and an uninterruptible power supply, met the infrastructural demands of computer-based assessment. Finally, the school consistently used prior years' AKM data as a planning basis, reflecting an evidence-informed approach to input planning. Taken together, these findings indicate that the input component of AKM implementation had achieved a good standard of readiness, characterized by organized human resources, a well-planned implementation strategy, adequate financing and infrastructure, and systematic use of historical assessment data.

Process Evaluation

Pre-implementation preparation followed a systematic sequence, including two rounds of computer-based national assessment simulation, the first three weeks before AKM to establish technical readiness and the second one week prior to consolidate final preparation. Technical preparation encompassed installation and testing of the assessment application, inspection of computer hardware, internet connectivity testing, and the development of standard operating

procedures for handling technical disruptions, while human-resource preparation included proctor and supervisor training and intensive briefing for students.

“There were several preparation steps: first, a physical inspection of all devices two weeks before AKM; second, installation and testing of the assessment application on all units; third, clearing the registry and disabling unnecessary programs; fourth, testing internet speed; and finally, preparing a standard operating procedure for handling technical disruptions” (School Operator, interview, May 13, 2026).

Implementation itself proceeded over two days, one session per day, following Kemendikbudristek procedures without any observed procedural violations: sessions began and ended on schedule, and proctors read the assessment rules aloud before each session. Minor technical disruptions did occur but all were resolved promptly through immediate switching to a backup connection, safe restarting and reassignment to backup units, and token regeneration through the operator dashboard. Observation confirmed that students remained calm during these interruptions, guided by supervising teachers, and that the assessment room maintained a conducive atmosphere throughout, with no rule violations and no student required to repeat the assessment because of technical failure.

Coordination among the principal, teachers, and operator was sustained through an active WhatsApp group and brief inter-session briefings; the principal conducted direct monitoring approximately every 30 minutes, complementing real-time operator reports, while a district supervisor was present on the first day and signed off on each session’s minutes.

“Coordination ran very well. The principal routinely checked on the condition of each room. The operator was very responsive. Any technical issue was handled within minutes. I felt fully supported throughout the implementation” (Grade V Teacher, interview, May 12, 2026).

Two days after implementation, the school convened an internal evaluation meeting attended by the entire AKM team, in which members documented constraints and recommendations. Students themselves described the assessment experience positively despite initial nervousness, attributing their composure to prior teacher preparation and the calm handling of technical glitches by the operator and supervising teacher. Collectively, these findings indicate that the process component of AKM implementation adhered closely to national procedures, supported by effective coordination, responsive problem-solving, and a documented culture of post-implementation reflection consistent with continuous quality-improvement practice.

Product Evaluation

The clearest evidence of AKM’s contribution to educational quality assurance emerged in the product component. According to Rapor Pendidikan data, 73.33% of grade-five students reached the proficient or advanced level in reading literacy and 76.67% in numeracy (Figure 2), both exceeding the school’s revised target of 70% (raised from a previous baseline target of 60%), reflecting an explicit, data-driven ratcheting of institutional ambition following earlier assessment cycles.

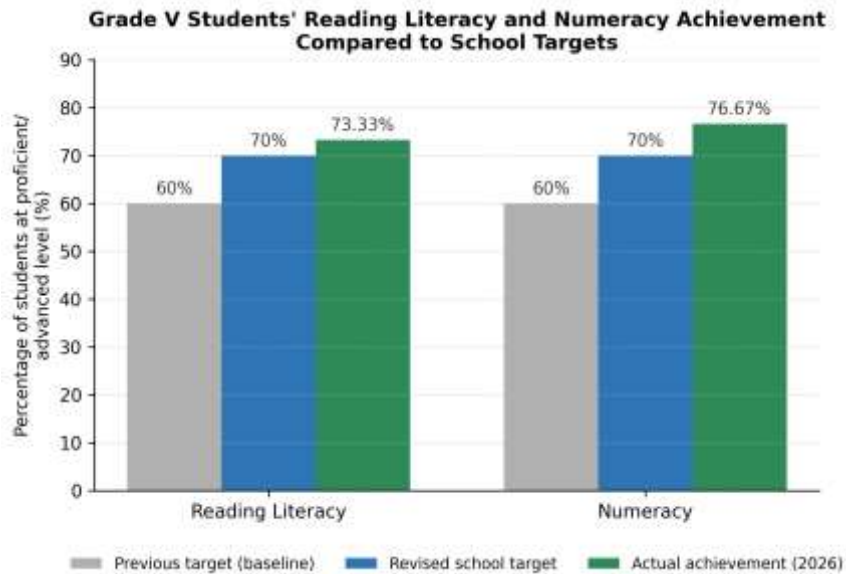


Figure 2. Grade V Students' Reading Literacy and Numeracy Achievement Compared to School Targets

Importantly, these results were not treated merely as a reporting outcome but were actively mobilized to refine instruction. Teachers used indicator-level data to design targeted lessons, develop remedial programs for students at the basic level, and implement differentiated instruction; the principal, in turn, used the Rapor Pendidikan as a reference for revising the school curriculum, semester programs, and lesson plans, and presented findings to parents during school-community meetings.

"I use the AKM results as a mirror for self-reflection. Indicators with low scores become a priority in the next instructional plan. I changed my approach to teaching reading comprehension, using more discussion and open-ended questions rather than multiple-choice items" (Grade V Teacher, interview, May 12, 2026).

This shift was corroborated by observed use of contextual reading materials, group-discussion activities, and reasoning-based numeracy exercises, as well as by revised lesson plans, formative assessments, and remedial/enrichment program documents. Beyond the immediate literacy and numeracy gains, the school reported broader programmatic successes: implementation without significant incident and full participation, achievement exceeding the 70% target for both competencies, heightened teacher awareness of text- and context-based instruction, and the establishment of a data-reflection culture. The principal actively shared these practices through teacher and principal working-group forums, with several neighboring schools conducting comparative studies of the school's assessment preparation and Rapor Pendidikan analysis practices.

Sustainability was further reflected in the school's medium-term strategic plan, which incorporates numeracy strengthening through STEM approaches, expanded non-fiction reading materials, development of an AKM-like item bank, and joint literacy-numeracy training with the regional Education Quality Assurance Institute.

"AKM is not merely an annual activity, but part of the school's comprehensive quality-assurance system. We have incorporated AKM follow-up programs into our medium-term school plan and ensured that every teacher understands their role in supporting students' literacy and numeracy competency" (Principal, interview, May 12, 2026).

Taken together, the product evaluation indicates that AKM implementation generated a measurable, positive impact on educational quality assurance at SD Negeri Kunciran 4 – evident in improved literacy and numeracy outcomes, active instructional use of assessment data, an emerging data-driven decision-making culture, and integration of AKM results into the school's broader quality-assurance planning. Nonetheless, findings also point to remaining areas for improvement, particularly in extending literacy and numeracy support to students who have not yet reached the proficient level and in deepening teachers' capacity to analyze and apply AKM data as a basis for pedagogical innovation.

Table 4. Summary of CIPP Evaluation Findings

CIPP Component	Category	Key Evidence
Context	Good	Accurate stakeholder understanding of AKM as a diagnostic tool; clearly articulated diagnostic-data needs; active school literacy culture; supportive policy and external environment.
Input	Good	Active, coordinative principal leadership; adequate computer and network infrastructure; sustained multi-year student preparation strategy; adequate BOS-funded financing; 100% programme coverage.
Process	Good compliant with national procedures	Systematic pre-assessment simulation; effective real-time coordination; prompt handling of technical disruptions; documented post-implementation reflection.
Product	Good positive impact on quality assurance	73.33% literacy and 76.67% numeracy proficiency, exceeding the 70% target; active use of results for remedial and differentiated instruction; integration into medium-term school planning.



Discussion (مناقشة)

The finding that stakeholders at SD Negeri Kunciran 4 held an accurate understanding of AKM as a diagnostic instrument is consistent with Tayibnapis's (2023) contention that the success of any evaluation program hinges substantially on the depth of stakeholders' comprehension of its purpose and philosophy. This finding stands in useful contrast to Nurwahidah et al. (2023), who identified limited teacher and principal understanding of AKM's meaning and function as a principal obstacle to its implementation in other elementary schools. The present case suggests that accurate conceptual understanding, cultivated through sustained socialization, functions as a precondition for the long-term, integrative preparation strategy observed at SD Negeri Kunciran 4.

This interpretation is reinforced by Solekha et al.'s (2024) observation that AKM policy carries high relevance to schools' diagnostic needs, particularly in surfacing competency gaps that content-based testing tends to obscure. Similarly, the active school literacy ecosystem observed here (daily reading time, reading corners, and the School Literacy Movement) aligns with Wahyuni and Subandowo's (2025) finding of a significant positive correlation between school literacy culture and AKM achievement. Read together, these findings suggest that contextual readiness for AKM is not reducible to policy compliance alone, but depends on the

alignment of leadership commitment, stakeholder understanding, an embedded literacy culture, and external support.

The active, coordinative leadership demonstrated by the school principal supports Mulyasana's (2022) argument that instructional leadership is a determining factor in the success of quality-assurance implementation; a principal who comprehends program substance, engages directly in planning, and builds cross-functional coordination substantially strengthens implementation quality. The adequacy of information-technology infrastructure observed here (30 functioning computers, stable connectivity, a competent operator) corroborates Sari and Sayekti's (2022) finding that infrastructure readiness is a key determinant of computer-based AKM implementation quality; schools with limited infrastructure, by contrast, tend to show weaker implementation outcomes.

However, consistent with Stufflebeam's own caution that quality input is necessary but not sufficient for programmatic success, this study's findings show that infrastructure and leadership alone did not guarantee strong outcomes. They required pairing with the sustained, integrative preparation strategy that Pratiwi and Rahmat (2023) identify as more effective than short-term item drilling. The school's practice of using prior years' AKM data as a planning basis further exemplifies the evidence-based management cycle that Rahminawati (2021) associates with mature internal quality-assurance systems.

The process findings extend prior AKM process research, much of which has concentrated narrowly on technical readiness or incident description (e.g., Sari & Sayekti, 2022). By additionally examining inter-team coordination mechanisms, the principal's monitoring routines, and student experience during the assessment, this study offers a more complete account of process quality than earlier, narrower evaluations. These findings also resonate with Davies and Jenkins's (2022) observation, in the context of England's Key Stage assessments, that cognitive and emotional strain during assessment is exacerbated when daily instruction remains rote; the calm, well-prepared classroom climate documented here suggests that SD Negeri Kunciran 4 has, to a meaningful extent, avoided this risk through its integrative instructional strategy. Similarly, Davidson and Thompson's (2023) account of Australia's successful paper-to-digital NAPLAN transition, enabled by intensive proctor training, parallels the training-centered technical preparation observed here.

The literacy and numeracy achievement levels documented in this study (73.33% and 76.67% at the proficient/advanced level, respectively) indicate that the school's process and input investments translated into measurable competency gains. More significant for quality-assurance theory, however, is evidence that these results were not treated as a terminal output but were folded into an ongoing improvement cycle. It consists with Rahminawati's (2021) three dimensions of assessment-result utilization: diagnostic (identifying strengths and weaknesses), prescriptive (designing appropriate interventions), and formative (monitoring ongoing development). SD Negeri Kunciran 4 exhibited all three: data were used diagnostically, remedial programs were designed prescriptively based on that diagnosis, and the improvement cycle was explicitly intended to continue into subsequent AKM cycles, a pattern Pratiwi and Rahmat (2023) identify as distinguishing schools that meaningfully use AKM from those that use it only for compliance reporting.

The persistence of a numeracy achievement gap relative to literacy, despite exceeding the revised target, merits particular attention. Widyaningrum (2022) notes that numeracy is often the more difficult competency to improve, requiring a fundamental pedagogical shift from procedural mathematics instruction toward contextual, problem-based approaches; Arfinanti, Latif, Wulandari, and Al Hajid (2025) similarly demonstrate that AKM-oriented, contextualized teaching modules can effectively strengthen numeracy outcomes. These findings point toward a

concrete direction for the school's continued improvement efforts. Finally, the school's practice of disseminating its AKM preparation and data-analysis practices through teacher and principal working-group forums echoes Wulandari and Mauludin's (2024) argument that effective quality-assurance management extends benefits beyond the individual school to the broader educational system.

Overall, by evaluating all four CIPP components in an integrated manner this study offers a more comprehensive account of how a public elementary school can transform a national assessment policy into a locally owned, self-sustaining mechanism for educational quality assurance. The central practical implication is that AKM's contribution to quality assurance depends less on any single component than on the coherence among contextual understanding, adequately resourced input, a procedurally sound and responsive process, and a product-utilization culture that treats assessment results as a continuous improvement input rather than a compliance artifact.

The four discussions above point to a contribution that goes beyond confirming or qualifying individual prior findings. Where previous CIPP-based evaluations of minimum-competency assessments have generally examined either a single component in depth (e.g., Davies & Jenkins's, 2022, focus on process and product in England) or a single institutional level (e.g., Solekha et al.'s, 2024, national policy analysis), this study demonstrates that the four CIPP components function as an interdependent chain at the school level: accurate contextual understanding enabled a long-term, evidence-based input strategy; that input, in turn, supported a procedurally disciplined and responsive process; and that process yielded product outcomes that were reinvested into the next planning cycle rather than treated as a terminal report. This chained interdependence, rather than any single component in isolation, appears to be the more theoretically important finding, since it suggests that weaknesses at an early stage are likely to constrain the quality of every subsequent stage, regardless of how well that later stage is managed in isolation.



Conclusion (خاتمة)

This study evaluated the implementation of the Minimum Competency Assessment (AKM) program at SD Negeri Kunciran 4, Tangerang City, as an instrument of educational quality assurance, using Stufflebeam's CIPP model. Four conclusions follow from the findings. First, the contextual conditions for AKM implementation were favourable: stakeholders understood AKM accurately as a diagnostic instrument, diagnostic-data needs were clearly articulated by school leadership, and this understanding was reinforced by an active literacy culture, supportive national policy, and external stakeholder engagement. Second, input readiness was adequate, characterized by active and coordinative principal leadership, sufficient computer-based assessment infrastructure, a sustained multi-year student-preparation strategy, adequate financing, full programme coverage with 100% attendance, and consistent use of historical assessment data for planning. Third, the implementation process complied closely with Kemendikbudristek procedures, supported by systematic pre-assessment simulation, effective real-time coordination, prompt and professional handling of technical disruptions, and a documented culture of post-implementation reflection. Fourth, the resulting outcomes evidence a positive contribution to educational quality assurance: 73.33% of students achieved proficient/advanced reading literacy and 76.67% achieved proficient/advanced numeracy, both exceeding the school's revised 70% target, with results actively mobilized through remedial instruction, differentiated teaching, and data-informed school planning.

These findings carry several implications for policy and practice. Accurate understanding of AKM's diagnostic purpose should continue to be reinforced through sustained socialization

involving teachers, parents, and students, so that the program is not reduced to a formal examination. Adequate instructional leadership and information-technology infrastructure should be treated as necessary preconditions for successful implementation, requiring planned budgetary allocation for periodic hardware renewal and continued development of principals' managerial competence in data-based program management. Technical and pedagogical training for the implementation team should be conducted as an ongoing professional-development activity rather than a pre-assessment formality. Finally, the persistent numeracy gap points to the need for a pedagogical shift from procedural mathematics instruction toward contextual, problem-based numeracy teaching integrated with students' everyday experience.

Based on these conclusions, the following recommendations are proposed for school principals and relevant stakeholders: (1) shift mathematics instruction from procedural memorization toward contextual numeracy reasoning through STEM-based module workshops and teacher working-group discussions to design higher-order-thinking item banks; (2) cultivate an inclusive data-literacy culture by requiring all teachers to participate in technical guidance on Rapor Pendidikan analysis; (3) lead regular post-assessment reflection forums to translate statistical data into concrete instructional guidance, enabling differentiated support for students at the basic competency level; and (4) restructure the school operational budget to progressively renew outdated computer hardware, expand internet capacity, and procure uninterruptible power supply units.

This study is subject to several limitations. As a single-site qualitative case study, its findings reflect the specific institutional and socio-economic conditions of an urban public elementary school and may not generalize to schools with markedly different resource levels or leadership contexts. Data collection also relied substantially on self-reported interview accounts, which may still be subject to social desirability bias, particularly among school leaders reporting on their own program. Future research would benefit from multi-site comparative CIPP evaluations across schools with differing accreditation levels and resource conditions, from longitudinal designs tracking AKM utilization and achievement over multiple assessment cycles, and from mixed-methods approaches that combine this study's qualitative depth with quantitative analysis of Rapor Pendidikan trends across a larger sample of schools.



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