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ELEMENTARY SCHOOL TEACHERS' EXPERIENCES OF CONDUCTING CLASSROOM ACTION RESEARCH FOR PROFESSIONAL DEVELOPMENT AND LEARNING QUALITY IMPROVEMENT: A PHENOMENOLOGICAL STUDY

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Kata Kunci:	ABSTRAK
Penelitian Tindakan Kelas, Mutu Pembelajaran, Guru, Sekolah Dasar	Penelitian tindakan kelas (PTK) merupakan instrumen strategis dalam penjaminan mutu pembelajaran mikro di kelas sekaligus wahana pengembangan profesionalisme guru secara berkelanjutan, meskipun pada praktiknya di tingkat sekolah dasar kerap berbenturan dengan hambatan metodologis dan beban administratif. Penelitian kualitatif fenomenologis ini bertujuan untuk menggali secara mendalam esensi pengalaman hidup, persepsi, tantangan, serta manajemen pelaksanaan PTK oleh guru SD/MI. Data dikumpulkan melalui wawancara mendalam (<i>in-depth interview</i>) baik secara daring maupun luring. Subjek penelitian melibatkan 20 orang guru SD/MI (participants) yang dipilih menggunakan teknik <i>purposive sampling</i> dari empat wilayah, yaitu Jawa Barat, Jawa Timur, Sumatra Selatan, dan Lampung. Data dianalisis mengaplikasikan <i>Interpretative Phenomenological Analysis</i> (IPA) melalui tahapan <i>bracketing</i> , reduksi fenomenologis, pemetaan tema, dan sintesis makna. Temuan utama penelitian menunjukkan bahwa: sebanyak 90% guru telah mengimplementasikan PTK berbasis kebutuhan nyata kelas (<i>need-based</i>), seperti mengatasi dampak penggunaan gawai pada siswa; sebanyak 10% guru belum atau baru mempersiapkan diri untuk melaksanakan PTK; Kendala utama yang diidentifikasi berpusat pada kesulitan teknis-metodologis; Pelatihan dan lokakarya (<i>training/workshop</i>) terbukti menjadi solusi efektif untuk mengatasi hambatan metodologis tersebut; PTK dimaknai dan difungsikan sebagai mekanisme peringatan dini (<i>early warning system</i>) serta sarana evaluasi diri (<i>self-evaluation</i>) yang mendasari perbaikan kualitas berkelanjutan

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(*Continuous Quality Improvement*); dan Para guru menilai frekuensi pelaksanaan PTK sebanyak 1 kali per semester sebagai target yang paling ideal, rasional, dan realistis untuk menjaga keseimbangan antara kualitas intervensi, ritme KBM harian, dan beban administratif. Penelitian ini merekomendasikan pergeseran paradigma manajemen sekolah dari pengawasan administratif sporadis menuju pendampingan berkelanjutan untuk membangun budaya meneliti (*research culture*) yang kokoh di sekolah.

Keywords:

Classroom Action Research, Learning Quality, Teacher Elementary School.

ABSTRACTS

Classroom action research (CAR) is a strategic tool for ensuring the quality of micro-learning in the classroom, as well as a vehicle for the continuous professional development of teachers, although in practice at the elementary school level it often faces methodological obstacles and administrative burdens. This phenomenological qualitative study aims to explore in depth the essence of the lived experiences, perceptions, challenges, and management of CAI implementation by elementary school and Islamic elementary school teachers. Data were collected through in-depth interviews conducted both online and in person. The study involved 20 elementary school and Islamic elementary school teachers (participants) selected using purposive sampling from four regions: West Java, East Java, South Sumatra, and Lampung. Data were analyzed using Interpretative Phenomenological Analysis (IPA) through the stages of bracketing, phenomenological reduction, thematic mapping, and synthesis of meaning. The main findings of the study indicate that: 90% of teachers have implemented need-based PTK, such as addressing the impact of gadget use on students; 10% of teachers have not yet or are just beginning to prepare to implement PTK; The main challenges identified centered on technical and methodological difficulties; training and workshops proved to be effective solutions for overcoming these methodological obstacles; PTK is understood and utilized as an early warning system and a tool for self-evaluation that underpins continuous quality improvement; Teachers consider conducting PTK once per semester to be the most ideal, rational, and realistic target for maintaining a balance between the quality of interventions, the rhythm of daily classroom activities, and the administrative workload. This study recommends a paradigm shift in school management from sporadic administrative supervision toward continuous mentoring/coaching to build a robust research culture in schools.

A. INTRODUCTION

The standard of a country's education directly influences the competence and quality of its human capital. The heavy investment in education reflects a widespread belief that the quality of schooling is a critical determinant of individual success and career advancement.(Mahanani et al., 2022) Quality is considered a crucial factor, as it essentially reflects a product's superiority compared to others. The implementation of management practices to improve the quality of education is a practical solution that holds the promise of effectively managing educational quality indicators to work in synergy toward enhancing educational quality.(Munirom, 2021) High quality education is the hope of both the public and the government for enhancing the competitiveness of human resources. The dynamics of societal life must be addressed through the management of high-quality education.(Ismanto, 2018) The empirical evidence demonstrates that while the obstacles remain significant, actionable

strategies offer a viable path toward improving educational outcomes across both contexts.(Sulistiana & Imron, 2024)

This research study indicates that the issues surrounding educational quality in Indonesia are highly diverse. These issues can be examined in terms of teacher quality which relates to teacher welfare and student achievement educational equity, and curriculum reform.(Azis et al., 2026) Regarding teacher quality in Indonesia, the majority of teachers are assessed as not yet professional in their teaching practices due to inadequate teacher welfare, which consequently leads to low student achievement.(Sartika et al., 2023) This study emphasizes that improving the quality of education requires holistic multisectoral synergy, equitable use of technology, and the implementation of evidence-based policies to create an educational system that is inclusive and adaptable to global dynamics.(Jahudin et al., 2025)

In efforts to improve the quality of education, educational management plays a crucial role as it serves as the foundation for organizing all stages of education. One key aspect of educational management is evaluation. To maintain this quality, schools require continuous evaluation.(Cahyani, 2026) Quality refers to the distinct characteristics of an institution that set it apart from others but can serve as a model for other institutions. The quality of learning is a key indicator of the success of a country's education system, including Indonesia's.(Adnan et al., 2024)

From an Islamic perspective, the quality of education also encompasses a spiritual dimension that demands a high level of dedication in the management of education. Research studies confirm that the application of TQM in Islamic education is not merely a managerial strategy but also a manifestation of the value of *ihsan*, which guides educational institutions toward achieving holistic and sustainable excellence.(Ardaini et al., 2025) Educational quality requires alignment between the needs of stakeholders and the services provided by educational administrators. This is closely related to teacher professionalism.(Sembiring et al., 2021)

A teacher possesses four competencies: pedagogical, personal, professional, and social. According to Law No. 14 of 2005 on Teachers and Lecturers, professional competence refers to the ability required to establish oneself as a professional teacher in one's field specifically, mastery of the subject matter to be taught along with its methods, a sense of responsibility toward one's duties, and a sense of camaraderie with fellow teachers.(Azizah & Fatamorgana, 2021) An educator's professionalism is measured not only by their teaching ability but also by their contribution to the ongoing development of the profession through research and scholarly publications. Classroom action research (CAR) is a scholarly activity conducted by teachers or researchers in the classroom through a series of planned interventions. This approach focuses on improving the quality of the learning process and continuously enhancing student learning outcomes. In addition, classroom action research (CAR) is also defined as a systematic process for refining, improving, and developing instructional practices and educational services designed to optimize students' growth and development during the learning process.(Najah et al., 2019)

In general, classroom action research takes place in a systematic, continuous cycle. This process begins with problem identification and initial observations to map out classroom challenges, followed by action planning to determine strategies and indicators of success. Next, the teacher implements the action in the classroom while conducting observations to assess the impact on learning. The collected data is then

reflected upon to evaluate the achievement of the targets; if the results are not optimal, re-planning is conducted for the next cycle. Once the targets are met, the process concludes with reporting and sharing the results as a form of scientific publication.(Rahayu & Saskia, 2025) Classroom action research serves as a concrete step teachers can take to continuously improve and enhance the quality of learning.(Hikmawati et al., 2025) A study conducted by Lungguh Puri Pramswari explains that, in general, the findings indicate that while all teachers emphasize the importance of action research, the majority still feel constrained in implementing it.(Pramswari, 2016) Classroom action research (CAR) is widely regarded as a highly demanding task for educators due to the substantial workload it introduces. To examine this issue, this study investigated the specific challenges teachers encounter when conducting action research. Employing a qualitative phenomenological design, the study focused on twenty-one purposively sampled teachers at Tagoloan Central School in the Division of Misamis Oriental, Philippines. Data gathered through in-person interviews were analyzed using Moustakas's phenomenological framework. The analysis revealed five primary thematic challenges: insufficient knowledge, the rigorous nature of research work, time constraints, lack of intrinsic motivation, and the absence of career promotion incentives.(Jaminal, 2026) The study highlights that beginner elementary teachers encounter diverse emotional and professional challenges, including role transition, time management, and relationship-building with students, peers, and parents. Their lived experiences were predominantly shaped by classroom management difficulties, the need for effective mentorship, systemic mismatches between teacher education and actual classroom demands, and school environment adaptation. To secure their future, teachers prioritized professional growth via postgraduate education, explored potential employment opportunities abroad for financial security, and leaned on spiritual faith to maintain resilience and cultural awareness.(Maglupay & Mae, 2024) The study presented three strategic alternatives: establishing flexible scheduling alongside dedicated research time, fostering supportive leadership frameworks for structured collaboration, and expanding access to research resources and funding. Among these options, the development of supportive leadership frameworks for structured collaboration was identified as the most effective solution, as it directly addresses structural impediments and creates an environment conducive to practical action research. This finding highlights the transformative potential of action research in enhancing instructional quality when reinforced by robust institutional backing to mitigate implementation barriers.(Tomol, 2025)

Existing literature extensively frames classroom action research as a systematic, cyclic intervention designed to continuously enhance learning quality (Rahayu & Saskia, 2025; Hikmawati et al., 2025). However, a clear divergence exists between the normative ideal of CAR and its practical implementation. Previous studies have primarily investigated CAR through procedural mechanisms, training interventions, institutional leadership solutions (Tomol, 2025), or general operational obstacles such as time constraints, heavy administrative workloads, lack of research knowledge, and promotional incentives (Jaminal, 2026; Pramswari, 2016). Furthermore, while studies on early-career teachers highlight broad professional adaptation challenges (Maglupay & Mae, 2024), current research predominantly treats CAR as an external

administrative mandate or a technical instructional tool rather than a deeply lived professional practice.

What remains insufficiently explored is how teachers subjectively experience, interpret, and internalize the dual demand of being both an educator and a researcher. There is a critical knowledge gap regarding how teachers negotiate their professional identity, reconcile heavy administrative burdens with pedagogical goals, and assign personal meaning to CAR within their daily classroom reality. Existing studies identify structural and technical barriers, but they fail to capture the internal phenomenological dynamics of how teachers navigate these tensions without compromising their well-being or instructional quality. Therefore, a phenomenological investigation is essential to bridge this gap by moving beyond surface-level administrative challenges to uncover the lived reality of teachers executing CAR as an embedded professional practice.

This study aims to explore the phenomenological experiences of elementary school teachers in Indonesia in implementing classroom action research. The study focuses on how teachers perceive the meaning of classroom action research, how classroom action research functions as a system for ensuring the quality of learning, and how classroom action research should ideally be managed so that it does not become an excessive workload for educators.

B. METHOD

This study employs a qualitative approach with an interpretative phenomenological analysis (IPA) design to deeply explore how elementary school teachers subjectively experience and assign meaning to the implementation of classroom action research (CAR) within their professional practice. (Azis et al., 2025) IPA was chosen because of its double hermeneutic and idiographic nature, allowing researchers to interpret how participants make sense of their lived experiences within their specific institutional and cultural contexts.

The participants consisted of 20 elementary school (SD) and Madrasah Ibtidaiyah (MI) teachers from various regions in Indonesia, selected through purposive sampling to capture a rich diversity of geographic backgrounds, school types (public and private), and levels of teaching experience.

Participant	Region	School Type	Teaching Experience	CAR Experience
P1	West Java	SD IT Khoiru Ummah	6 years	3 Experienced
P2	West Java	SD IT Khoiru Ummah	7 years	4 Experienced
P3	West Java	MI Darunnajah 2 Cipining	9 years	6 Experienced
P4	West Java	MI Darunnajah 2 Cipining	6 years	4 Experienced
P5	West Java	SD IT Riyadul Bayan	5 years	4 Experienced
P6	West Java	SD IT Riyadul Bayan	5 years	3 Experienced

P7	West Java	SDN Mekarwangi	3 years	2 Experienced
P8	West Java	SDN Argapura 01	6 years	4 Experienced
P9	West Java	SDN Argapura 01	8 years	8 Experienced
P10	West Java	SD IT Uswatun Hasanah	6 years	6 Experienced
P11	Central Java	MI Muhammadiyah Bejen	10years	8 Experienced
P12	Central Java	SD IT Muhammadiyah Truko	10 years	8 Experienced
P13	Central Java	SD IT Muhammadiyah Truko	8 years	7 Experienced
P14	East Java	SDN 3 Bangunsari	6 years	7 Experienced
P15	East Java	MI Sunan Giri	8 years	7 Experienced
P16	Banten	MIS Al-Manshur Darunnajah 3	8 years	7 Experienced
P17	Banten	MIS Al-Manshur Darunnajah 3	8 years	7 Experienced
P18	South Sumatra	SD Islam Al-Hikmah	8 years	7 Experienced
P19	Lampung	SDN 07 Pesawaran	8 years	6 Experienced
P20	East Kalimantan	SDN Teluk Pandan	6 years	8 Experienced

Primary data were gathered through semi-structured, in-depth interviews conducted both in person and virtually (via Google Meet, Zoom, and WhatsApp video calls) to allow flexible yet deep narrative exploration. An open-ended interview guide was utilized to encourage participants to articulate their personal feelings, professional identity shifts, administrative burdens, and perceived meanings regarding CAR. Data were collected exclusively through semi-structured, in-depth qualitative interviews to capture the depth of participants' lived experiences and personal interpretations regarding Classroom Action Research (CAR). Fully structured interviews were deliberately avoided to ensure flexibility and to allow participants the freedom to articulate their emotional, administrative, and professional journeys. (Negi, 2026)

The interview protocol was developed based on phenomenological principles and focused on four main narrative domains:

1. Meaning-Making: Participants' personal conceptualization of CAR and their perceived role as teacher-researchers;
2. Lived Experience & Emotional Dynamics: Emotional responses, personal triumphs, and psychological burdens experienced during cycle execution;

3. Workload and Systemic Tensions: Perceived administrative workload pressures, time constraints, and institutional expectations; and
4. Quality Management and Sustainability: How CAR functions within their daily routines to maintain learning quality without creating excessive professional burnout. (Negi, 2026)

Examples of open-ended interview questions included: *"How do you personally perceive the role of Classroom Action Research in shaping your professional identity as an educator?" "Could you describe a specific instance where implementing a CAR cycle created significant tension or harmony with your daily teaching and administrative responsibilities?" "In what ways has the process of reflecting on CAR cycles altered your understanding of learning quality in your classroom?"*

Data collection was conducted over a five-month period (Mei to July 2026). A total of 20 primary interview sessions were conducted (one dedicated session per participant), supplemented by brief follow-up member-checking sessions when clarification of transcriptions was required. To accommodate geographic diversity and teacher availability across four provinces, interviews were conducted either in-person (*offline*, \$n = 8\$) at the participants' respective schools or *online* (\$n = 12\$) via Google Meet, Zoom, or WhatsApp video calls. Methodological consistency between online and offline mediums was rigorously maintained through the following protocols: *first*, identical protocol: All sessions strictly adhered to the same semi-structured interview guide and sequence. *Second*, visual engagement: online sessions required mandatory high-definition video feeds to observe non-verbal cues, emotional expressions, and body language equivalent to face-to-face interactions. *Third*, Standard Duration: Each interview session lasted between 45 to 75 minutes. *Fourth*, language: All interviews were conducted in Bahasa Indonesia (with occasional local expressions used by participants) to ensure participants could express their experiences naturally and fluently. Direct quotes selected for the manuscript were translated into English using back-translation procedures to preserve original meaning and interpretive accuracy.

With the explicit written informed consent of all participants, every interview session was audio- and video-recorded. The recordings were subsequently transcribed verbatim into written Bahasa Indonesia text, capturing speech pauses, emotional emphasis, and non-verbal nuances. The transcription process produced over 40 pages of raw text, which served as the primary empirical material for Interpretative Phenomenological Analysis (IPA).

Data were analyzed using Interpretative Phenomenological Analysis (IPA), adhering to its idiographic and double-hermeneutic principles (Smith & Osborn, 2015) to interpret how individual teachers made sense of their Classroom Action Research (CAR) experiences. Rather than using generic thematic coding or statistical distributions, all 20 transcripts underwent an 8-stage iterative analytical pathway:

1. Immersion & Bracketing (*Epoche*): Repeated reading of transcripts and listening to audio to ensure familiarity, while documenting reflections to bracket prior assumptions.
2. Exploratory Coding: Line-by-line coding on individual transcripts across three levels: *descriptive* (content), *linguistic* (language and tone), and *conceptual* (psychological meaning).
3. Experiential Statements: Distilling initial codes into concise statements reflecting the core lived experience.

4. Individual Emergent Themes: Clustering experiential statements into themes unique to each specific case.
5. Idiographic Case Analysis: Completing Stages 1–4 entirely for one participant before analyzing the next to preserve individual narrative integrity.
6. Cross-Case Comparison: Comparing individual analyses to identify theoretical convergence, divergence, and shared patterns across cases.
7. Thematic Hierarchy: Structuring emergent cross-case themes into overarching Superordinate and supporting Subordinate Themes.
8. Interpretative Synthesis: Integrating verbatim participant quotes with theoretical insights to articulate the final phenomenological narrative.

C. RESULT AND DISCUSSION

Result

1. Teachers' Experiences in Conducting Action Research

The phenomenological analysis revealed that teachers perceive classroom action research (CAR) not merely as a mechanical administrative procedure, but as a dynamic continuous journey of professional self-reflection. Across various geographic contexts from Java and Sumatra to East Kalimantan participants' accounts illuminated how teachers navigate early-career anxiety, methodological adaptation, and identity transformation through action research. As a descriptive background to the phenomenological inquiry, eighteen of the 20 participants had directly conducted Classroom Action Research (CAR) at various points in their careers, while two participants had not yet completed a full CAR cycle and were in the initial planning phase. Rather than framing this distribution as a statistical metric, these baseline figures serve solely to contextualize the landscape of CAR practice across the studied schools. The phenomenological analysis focuses on the subjective meanings, emotional dynamics, and professional realities underlying these experiences.

For participants who actively engaged in CAR, the impetus to initiate research cycles was predominantly internal and demand-driven, emerging directly from real-time classroom challenges rather than mere administrative compliance. Teachers articulated three primary pedagogical catalysts: Academic Remediation: Responding to declines in average student scores below minimum competency thresholds, which prompted critical re-evaluations of instructional strategies. Student Engagement Crises: Addressing noticeable drops in student focus and active participation often attributed to digital distractions by designing interactive interventions. Transition to Evidence-Based Teaching: Moving away from conventional lecture-based instruction to test the empirical efficacy of new learning media and active strategies.

An interpretive analysis of the two participants who had not yet completed a CAR cycle as well as experienced teachers reflecting on their initial attempts revealed that non-execution did not stem from a lack of concern for student learning. Instead, the narratives demonstrated that technical hesitation and administrative overload created significant barriers, particularly for early-career educators.

Participant P7 (West Java, SDN Mekarwangi, 3 years exp.): *"In my first two years of teaching, my full energy was spent just trying to manage classroom behavior and adapt to daily lesson plans. When school leaders asked about CAR, I felt completely lost. Designing the research cycle, formulating hypotheses, and creating observation tools felt*

overwhelming. It wasn't that I didn't care about my students' reading issues, but I simply didn't have the technical confidence or time."

Participant P₁ (West Java, SD IT Khoiru Ummah, 6 years exp., reflecting on early career): "When you are new, daily administrative routines consume all your time. Without structured workshops or a mentor walking you through data analysis, the technical rigor of CAR makes you step back. Workshops eventually helped me bridge that gap, but initially, technical uncertainty kept me from starting."

As illustrated by P₇ and P₁, non-implementation or initial delay is strongly associated with early-career role adaptation. For novice teachers, foundational survival skills such as basic classroom management and daily administrative duties take precedence, making the added methodological rigor of CAR feel like an unmanageable demand without targeted mentorship and capacity-building workshops. (Ayaz et al., 2026)

Table 1. Matrix Analysis of Elementary School/Madrasah Ibtidaiyah Teachers' Experiences in Conducting Action Research (CAR)

Analysis Dimension	Experienced CAR Practitioners (n = 18)	Novice / Hesitant CAR Practitioners (n = 2)
Implementation Status	Has implemented / conducted classroom action research (CAR) throughout their career.	Has never conducted CAR / currently in the initial planning phase.
Teacher Profile & Demographics	Experienced / senior teachers and adaptively skilled teachers.	Dominated by novice / beginner teachers who are early in their teaching career.
Primary Focus / Orientation	Enhancing instructional quality and resolving students' learning issues.	Adaptation to classroom management & daily administrative duties.
Drivers / Constraints	Drivers (<i>Need-based</i>):	Constraints (<i>Technical-Methodological</i>):
	Decline in student grades below passing threshold/minimum competency standards.	Technical hesitation in designing cycles & action hypotheses.
	Decrease in focus, interest, & active participation (gadget impact).	Confusion in developing observation instruments.
	Desire to transition from conventional lecturing to <i>evidence-based teaching</i> .	Difficulty in processing action research data.
Solutions & Interventions	Independently maintaining the effectiveness of new media/strategies.	Training/Workshops (<i>Capacity Building</i>) as technical guidance.
Post-Intervention Impact	Optimizing <i>Continuous Quality Improvement</i> in the classroom.	Temporarily resolved: Motivated to initiate & conduct independent CAR.

A crucial key finding from this data is the effectiveness of training and workshops. It was demonstrated that the methodological challenges faced by the 10% group were temporary and could be overcome through capacity-building interventions. After receiving technical guidance or classroom action research training, teachers who were initially hesitant were able to take the initiative and implement classroom action research in their respective classrooms. This indicates that: *First*, Institutions play a key role: schools and relevant agencies/ministries cannot simply impose classroom action research as a formal requirement without providing adequate technical support. *Second*, A shift in the culture of research: classroom action research training has proven to be an effective bridging mechanism for transforming methodological fears into concrete actions to improve learning.

Thus, overall, these data underscore the importance of a shift in approach within school human resource management. School principals and supervisors are advised to no longer treat classroom action research as a sporadic individual administrative burden, but rather to develop ongoing mentoring and coaching programs. By supporting groups of novice teachers through practice-based training, schools can build a robust research culture to ensure continuous quality improvement in learning.

Participants who had initially struggled with the technical aspects of CAR emphasized that their eventual transition into active practitioner-researchers was heavily facilitated by past institutional workshops and peer mentoring. Rather than demonstrating a direct causal intervention effect within this study, participants' narratives illustrate how external technical guidance helped demystify the research process and build methodological confidence.

Participant P₁ (West Java, SD IT Khoirul Ummah, 6 years exp.): *"Before attending the district-level CAR workshop two years ago, I viewed action research as an intimidating academic task. The step-by-step guidance on how to construct observation sheets and analyze simple classroom data demystified the process. It did not reduce my teaching workload, but it gave me the technical clarity needed to start my first cycle."*

Participant P₁₁ (Central Java, MI Muhammadiyah Bejen, 10 years exp.): *"In-service training was a turning point for me. When our school foundation paired senior teachers with novice staff to co-design research cycles, the administrative fear vanished. The training provided the template, but the peer mentorship provided the confidence to implement it."*

The retrospective accounts of P₁ and P₁₁ highlight that training workshops and structured peer mentorship were experienced as crucial enabling factors rather than standalone solutions. While P₁ emphasized the acquisition of hard research skills (instrument construction and data processing), P₁₁ underscored the psychological reassurance gained through collaborative peer mentoring. Both accounts suggest that professional development initiatives are most impactful when they combine technical instruction with sustained institutional scaffolding. These participant-reported experiences yield important managerial implications for school leaders and educational policymakers. Rather than imposing CAR as a top-down administrative mandate, institutions should establish structured capacity-building ecosystems. School management must move beyond passive compliance enforcement by offering hands-on technical workshops, providing standardized research templates, and fostering collaborative mentorship frameworks to help teachers particularly early-

career educators bridge the gap between pedagogical intent and methodological execution.

2. The Importance of Action Research in Learning Quality Management and Ensuring the Quality of Learning

Based on the interview results, the informants agreed that classroom action research plays a crucial role as the most authentic instrument of self-reflection at the micro (classroom) level. Findings from the field confirm several key points regarding the urgency of classroom action research, including:

- a. Continuous professional development: Classroom action research facilitates the learning process and professional growth of teachers, which directly impacts improvements in student learning outcomes.(Pan et al., 2024) Through classroom action research, the role of teachers transforms from that of mere instructors to professional educators, classroom researchers (teacher-researchers), and agents of community service.(Kihwele, 2026)
- b. Learning Innovation: It encourages the application of creative and innovative teaching methods to create a dynamic, enjoyable, and engaging classroom environment.(Mirattanaphrai & Srikoorn, 2025)
- c. Concrete Problem-Solving: Serving as a tool to directly and precisely resolve learning obstacles that arise in the classroom. Designing instructional strategies that cultivate innovation, flexibility, and inclusive problem-solving skills in young learners.(Shahat et al., 2026)
- d. Sustained Quality Assurance: Helping teachers gain a deep understanding of students' learning needs to ensure continuous improvement in instructional quality. (Azis & Susanto, 2026)
- e. Understanding Student Characteristics: Helping teachers identify the unique characteristics of each student to encourage the adaptive refinement of teaching strategies.
- f. Enhancing Learning Motivation: Stimulating students' interest and active engagement in the learning process.(Kihwele, 2026)
- g. Method Evaluation and Experimentation: Serves as a platform for assessing the effectiveness of existing methods and systematically testing new teaching strategies.
- h. Reflection on Teaching Practices: Encourages teachers to engage in deep self-reflection on the teaching approaches and strategies they have implemented.

Thus, it can be concluded that classroom action research is of the utmost importance as the most practical and applicable self-evaluation tool at the classroom level. Field findings indicate that the urgency of classroom action research stems from a paradigm shift in the teacher's role, in which educators no longer merely act as conventional instructors but transform into teacher-researchers dedicated to continuous professional development.(Wu et al., 2022) This role transformation directly facilitates positive changes in learning outcomes and the fulfillment of students' basic needs.(Kolluru & Varughese, 2017) Through classroom action research, teachers are encouraged to continually reflect on and evaluate the effectiveness of the teaching approaches they have implemented, while also daring to test new, creative, and innovative strategies.(Mudzalifah & Zeki, 2025) This provides concrete solutions to classroom challenges, resulting in a learning environment that is more vibrant,

enthusiastic, and enjoyable free from monotony. The urgency of implementing classroom action research becomes even more pressing when considered in light of the evolving characteristics of a new generation of elementary school students. Field observations indicate a shift in student behavior, such as a decrease in attention span and activity levels caused by excessive exposure to gadgets.

These specific and contextual issues can no longer be resolved using abstract, general pedagogical theories; rather, they require measurable, hands-on interventions in the field. Classroom action research enables teachers to map the diversity of students' personalities and learning styles, which in turn demands consistent updates to teaching methods to reignite students' interest and motivation in learning. The urgency of classroom action research in learning quality management lies in its ability to provide real-time self-evaluation. Classroom action research successfully transforms instructional failures from an "academic risk" into "evaluation data" for continuous improvement.(Pratama et al., 2023) By utilizing classroom action research as an early warning system, schools not only ensure the achievement of curriculum goals but also build a culture of quality that is adaptive to changes in student characteristics in the digital age.

From the perspective of educational quality management, classroom action research plays a strategic role as an early warning system in evaluating the quality of micro-level learning in the classroom.(Chang et al., 2025) Within the framework of quality assurance, classroom action research works to detect early signs of failure or ineffectiveness in instructional methods, before these learning barriers accumulate and have a widespread impact on the decline of the school's academic performance at the macro level. Thus, the regular implementation of classroom action research not only serves as a practical problem-solving tool for teachers but also acts as a key pillar in maintaining the continuity and quality standards of educational services within schools on an ongoing basis.

In line with the views of Anisatul Azizah and Fayakuna Realitas, several objectives of classroom action research can be formulated as follows:

- a. To improve and enhance the quality of education,(Alhan & Farida, 2023)
- b. To enhance teachers' professional services in the context of serving students,
- c. To improve teaching practices in the classroom,
- d. To enhance communication among colleagues through research collaboration,
- e. To improve teachers' research capabilities.(Azizah & Fatamorgana, 2021)

Based on field findings, management analysis, and a literature review, it can be concluded that classroom action research is a crucial self-evaluation tool at the classroom level. The importance of classroom action research for teachers lies in its role in facilitating continuous professional development, which expands the teacher's role not only as an educator but also as a teacher-researcher. In practical terms, classroom action research is urgently needed to respond concretely to the dynamics of the new generation of students such as a decline in focus due to the use of electronic devices which requires immediate on-the-ground intervention through creative, innovative, and adaptive teaching methods.(Han, 2026) From a quality management perspective, classroom action research functions as an early warning system that reflects on, evaluates, and improves instructional quality before it leads to a decline in

the school's overall academic performance.(Alhan, 2024) Ultimately, the collaborative implementation of classroom action research can enhance teachers' professional services, continuously improve teaching practices, and optimize students' motivation and learning outcomes.(Nasongkhla & Sujiva, 2015)

3. The Benefits of Classroom Action Research and Its Positive Impact on the Professionalism of Teachers and Educational Institutions

Field findings from the interviews indicate that the implementation of Classroom Action Research (CAR) makes a significant positive contribution, both at the individual teacher level and at the institutional level of the school.

- a. Individual Level: Professional Development for Teachers. At the individual level, CAR serves as a means of continuous professional development:
 - 1) Enhancing Competencies & Confidence: These action research activities enhance teaching competencies, build self-confidence, and sharpen teachers' sensitivity in identifying and understanding the diverse learning needs of students.(Abidin et al., 2025)
 - 2) Fostering Creative Learning: In practice, CAR fosters varied, creative, and enjoyable learning in part through the use of concrete teaching materials which directly boosts student enthusiasm and learning outcomes.(Han, 2025)
 - 3) Problem-Solving & Career Benefits: In addition to serving as a problem-solving tool in the classroom, CAR also offers administrative and career benefits for teachers, such as fulfilling the requirement for a portfolio of scholarly work needed for promotion to a higher functional rank.
- b. Institutional level: school quality and reputation. Meanwhile, at the institutional level, the existence of classroom action research has a transformative impact on school quality in a holistic sense:
 - 1) Continuous Quality Improvement: classroom action research serves as a foundation for schools to conduct continuous evaluation and improvement of learning.
 - 2) Replication of Best Practices: Reports on classroom action research outcomes can serve as a collective reference for fellow educators to replicate best practices in other classrooms.
 - 3) Institutional Reputation: Ultimately, this tangible improvement in the quality of learning not only boosts public trust and interest in the school but also strengthens the institution's reputation and brand image as an outstanding educational institution that is committed to quality.

At the individual level, CAR serves as a means of continuous professional development.(Alhan et al., 2024) These action research activities enhance teaching competencies,(Nasongkhla & Sujiva, 2015) build self-confidence, and sharpen teachers' sensitivity in identifying and understanding the diverse learning needs of students. In practice, CAT fosters varied, creative, and enjoyable learning in part through the use of concrete teaching materials which directly boosts student enthusiasm and learning outcomes. In addition to serving as a problem solving tool in the classroom, CAT also offers administrative and career benefits for teachers, such as fulfilling the requirement for a portfolio of scholarly work needed for promotion to a higher functional rank.

Meanwhile, at the institutional level, the existence of classroom action research has a transformative impact on school quality in a holistic sense. Classroom action research serves as a foundation for schools to conduct continuous evaluation and improvement of learning (continuous quality improvement). Reports on Classroom action research outcomes can serve as a collective reference for fellow educators to replicate best practices in other classrooms. Ultimately, this tangible improvement in the quality of learning not only boosts public trust in and interest in the school but also strengthens the institution's reputation and brand image as an outstanding educational institution that is committed to quality. Classroom action research (CAR) yields profound dual-level benefits that drive both personal educator growth and holistic school advancement. At the individual level, CAR functions as a vital catalyst for continuous professional development, empowering teachers to refine their competencies, resolve daily classroom challenges creatively, and advance their professional careers. Simultaneously, at the institutional level, it serves as a cornerstone for ongoing quality improvement, enabling schools to scale best practices and elevate their overall academic reputation and public trust.

Based on the interview results, it appears that the consistent implementation of classroom action research yields a double-loop benefit, which is divided into two main domains:

a. Multidimensional impact on teachers (individual and professional impact)

The findings indicate that classroom action research provides comprehensive positive impacts for teachers, which can be grouped into three main domains:

- 1) Development of professional competencies and academic careers. classroom action research facilitates the fulfillment of teachers' academic obligations, such as promotion to higher functional ranks, requirements for certification/ PPG, and the publication of formal scholarly works. Quality implications: This formal recognition psychologically boosts teachers' self-efficacy when teaching, as the methods they use are scientifically validated (evidence-based teaching).
 - 2) Transformation of creativity and instructional innovation. Classroom action research encourages teachers to step out of the comfort zone of conventional methods (lectures) toward the use of concrete media and interactive strategies. The implication for learning quality is that instruction becomes more dynamic and varied, which participants perceived CAR as contributing to improved instructional practices and, in some cases, student learning outcomes for students in elementary school and Islamic elementary school classrooms.(Sancenon et al., 2022)
 - 3) Enhanced sensitivity and reflective skills. Action Research sharpens teachers' sensitivity in identifying and understanding the diversity of learning styles and students' specific needs. In terms of quality, teachers shift from a student-blaming mindset to a problem-solving mindset.
- b. For schools, the accumulation of classroom action research conducted by teachers makes a strategic contribution at the organizational management level:
- 1) Implementation of continuous quality improvement.(Darawong & Widayati, 2021) Classroom action research reports and findings serve as the basis for the school's internal evaluation to systematically map the

strengths and weaknesses of the learning process. Quality implications: schools can design quality assurance programs and teacher training with precision based on real-world evidence (evidence-based management).(Alhan, 2023)

- 2) Fostering a culture of knowledge sharing (academic culture). The results of a teacher's classroom action research do not end in their own classroom but become a reference and source of inspiration for fellow teachers. This quality implication fosters the development of a learning organization, where best practices are collaboratively replicated to collectively boost school quality.
- 3) Strengthening the school's brand image and public trust. The proven quality of learning and teachers' research activities directly benefit students and parents. The improvements in instructional quality serve as a unique competitive advantage that enhances the school's credibility, public interest, and reputation in the eyes of the community.

In line with the findings of the study by Diana et al., classroom action research has positive benefits for teachers and schools, including:

- 1) Identifying problems that arise in the learning process and taking effective steps or implementing solutions to address those problems
- 2) Identifying students' abilities and the appropriate methods to enhance their understanding
- 3) Gaining a deeper understanding of students' learning styles and characteristics to select suitable instructional models for classroom implementation
- 4) Boosting confidence in teaching
- 5) Improving student learning outcomes(Wang, 2025)
- 6) Enhancing the quality of instruction
- 7) Engaging in self-reflection to improve classroom teaching and learning
- 8) Identifying the strengths and weaknesses of a teaching method
- 9) Utilizing action research (classroom action research) as a platform for enhancing teaching and learning competencies.(Nasongkhla & Sujiva, 2015)
- 10) Identifying strengths and weaknesses in the learning process and developing innovations in teaching including the use of media, methods, and strategies to maximize learning outcomes.(Diana et al., 2021)

Based on the validators' assessment, the average score for the content/instructional design, media, and language aspects reached 97.45%. This score places the interactive e-book based on flipped learning for *classroom action research* in the "very good" category and deems it highly suitable for use. These results indicate that the product is ready to be implemented as either a primary or supplementary learning resource. However, given that this evaluation is limited to expert validation, further field testing is needed to measure the product's effectiveness in improving student learning outcomes, motivation, and competencies.(Sjafei & Suhardjono, 2025)

3. Time Management and the Ideal Frequency for Implementing Classroom Action Research

Based on qualitative accounts, participants consistently identified once per semester as the frequency perceived as most feasible for implementing Classroom Action Research (CAR). This operational baseline is grounded in the temporal reality of elementary classroom interventions, which typically require 2 to 3 weeks per cycle to observe meaningful shifts in student learning dynamics.

Participants expressed that attempting to conduct CAR more frequently within a single semester is often counterproductive, as it risks disrupting primary teaching responsibilities and inducing cognitive fatigue. From an educational management perspective, this finding underscores the critical role of school leadership in scheduling and workload distribution. Enforcing an excessive research cadence risks diminishing the interpretive quality of interventions and degrading the essence of CAR into a superficial exercise in administrative compliance. Consequently, school management should strategically support CAR execution such as through teacher rotation schemes or collaborative team-based research models so that action research is not experienced as an overwhelming individual burden.

Thus, from the teachers' lived perspective, the feasibility of CAR implementation centers on two main dimensions: *diagnostic responsiveness* and *workload sustainability*.

First, CAR offers pedagogical flexibility, allowing educators to initiate targeted cycles when learning indicators decline such as when average student performance drops below established proficiency standards. Participants emphasized that classroom learning dilemmas demand timely, structured interventions rather than delayed administrative responses.

Second, regarding operational feasibility, participants maintained that conducting CAR once per semester represents the most balanced cadence for harmonizing primary instructional duties with research obligations. Maintaining this specific frequency prevents disruption to the daily classroom rhythm while safeguarding teachers against administrative overload and burnout.

Finally, research in the field of education is a mandatory requirement for teachers and pre-service teachers as evidence of their accountability and scientific competence. One form of research that is highly relevant to classroom activities is classroom action research. (Utomo et al., 2024) As Syaifudin explains, when conducting action research, it is necessary to establish a time limit or timeframe for the research. It can be scheduled to last one month, one semester, or one year. (Syaifudin, 2021)

Analysis/Discussion

1. Interpretation of Results and Alignment with Objectives

The primary objective of this study was to examine teachers' experiences, perceptions, and the strategic urgency of classroom action research within the framework of learning quality management in Indonesian elementary schools (SD/MI). The empirical findings reveal two contrasting yet complementary dynamics across the surveyed educators: a vast majority ($n=18$) actively implement CAR throughout their careers, whereas a small minority ($n=2$) remain hesitant or inactive.

For the 90% majority group, CAR adoption is fundamentally need-based. Educators initiate action research not as a mere administrative duty, but as a direct response to dynamic classroom challenges, such as:

- a. Student academic performance falling below the Minimum Competency Criteria (KKM).
- b. Behavioral shifts in digital-native students, specifically diminished attention spans and reduced engagement resulting from screen exposure.
- c. A deliberate desire to shift from conventional lecturing toward evidence-based teaching using concrete, interactive media.

Conversely, the $n=2$ minority group consists predominantly of novice teachers whose primary focus is consumed by classroom management and daily administrative duties. Importantly, their hesitation stems from technical and methodological anxieties (e.g., designing research cycles, formulating hypotheses, and developing observation tools) rather than a lack of concern for student well-being. (Nugroho et al., 2026) The crucial key finding is that these technical constraints are temporary; structured workshop interventions and capacity-building programs successfully bridged this methodological gap, enabling novice teachers to confidently initiate independent action research.

2. Scientific Explanation and Theoretical Foundations

- a. Role Transformation: From Instructor to Teacher-Researcher. The high penetration of CAR among primary school teachers signifies a paradigm shift in teacher identity. Grounded in experiential learning theory and reflective practice frameworks, CAR transforms educators from passive curriculum deliverers into active teacher-researchers. (Wang, 2025) This transformation reconfigures the teacher's mindset from a *student-blaming perspective* (attributing learning failures solely to student deficiencies) to a *problem-solving perspective* (evaluating instructional design, media, and environmental factors). (Azis, 2025) Scientifically, when teachers scientifically validate their classroom interventions, their teaching efficacy (*self-efficacy*) increases significantly.
- b. CAR as an Early Warning System (EWS) in Educational Quality Management. (Handayani & Priyadi, 2026) From an educational management perspective, traditional quality assessment (e.g., standardized end-of-term exams) acts as a *lagging indicator* detecting learning failure only after it has occurred. (Sarsenbayeva et al., 2026) CAR fundamentally shifts this paradigm by functioning as a real-time Early Warning System (EWS) at the micro (classroom) level. Operating on the Plan-Do-Check-Act (PDCA) cycle of Total Quality Management (TQM): Plan: Teachers diagnose immediate micro-level issues (e.g., low attention span). Do: They implement contextual treatments (e.g., concrete manipulative media). Check: They observe behavioral and academic changes in real time. Act: They refine strategies before academic failure accumulates macro-structurally.
- c. Double-Loop Benefits for Individual and Institution. The empirical evidence (Maruyama, 2022) confirms that CAR yields double-loop benefits: This dual impact proves that CAR serves simultaneously as a personal career-

advancement tool and an organizational asset that strengthens the school's public credibility (*branding image*). (Ali et al., 2025)

3. **Synthesis and Comparative Analysis with Existing Literature**

The findings of this study strongly align with and expand upon prior educational research:

Research Dimension	Present Study Findings	Literature & Previous Studies	Comparative Synthesis
Objectives & Service	CAR enhances professional services, research capabilities, and peer communication.	Azizah & Fatamorgana (2021): CAR improves educational quality, professional services, and collaborative capabilities.	Consistent: Confirms that CAR is a multidimensional instrument for both instructional and interpersonal growth.
Teacher & School Impact	CAR sharpens problem identification, confidence, and student learning style mapping.	Diana et al. (2021): CAR increases teaching confidence, identifies learning styles, and fosters media innovation.	Consistent: Reaffirms that micro-interventions directly elevate student achievement and teacher confidence.
Timeframe & Feasibility	1 cycle/semester (or 1–2 per year) is ideal (2–3 weeks/cycle) to avoid burnout.	Syaifudin (2021); Utomo et al. (2024): Action research requires bounded timeframes (1 month, semester, or year) for accountability.	Extended: Adds practical nuance by showing that over-enforcing CAR frequency degrades research quality into administrative compliance.

While literature emphasizes the *idealistic* necessity of continuous research, our field findings introduce an essential operational boundary: workload management. Informants highlighted that requiring CAR more than once or twice a semester is counterproductive. Because an effective cycle at the elementary level requires 2 to 3 weeks of sustained intervention, excessive frequency causes administrative fatigue. Therefore, school leadership must implement strategic scheduling such as peer rotation or collaborative research teams to preserve research integrity. (Mahmod et al., 2023)

4. **Broad Implications for Human Resource Management (HRD) and Policy**

The broader implications of these findings extend to educational policy and institutional governance:

1. **Shift from Bureaucracy to Mentoring:** School principals and district supervisors must stop treating CAR as a sporadic, individual paper-pushing requirement. Instead, schools should establish structured mentoring/coaching systems pairing experienced teacher-researchers with

novice educators. The results indicate that contextual cognition factors (e.g., immersion, learning motivation, interactive experience, perceived incentives) in MTS enhance students' self-efficacy and emotional responses, which in turn foster creative thinking and collaborative intentions.(He et al., 2025)

2. Institutional Capacity Building: Since workshop interventions successfully unlocked research potential in the 10% minority group, educational departments must provide practice-based technical guidance as part of standard onboarding for new teachers.
3. Cultivating a Learning Organization: When CAR reports are shared collectively rather than stored in silos, schools evolve into Learning Organizations, where best practices are systematically replicated across classrooms.(Hendrawati et al., 2023)

5. Limitations and Future Research Directions

While this study offers valuable insights across diverse elementary schools and madrasahs in Indonesia, certain limitations should be addressed in future inquiries:

- a. Methodological Scope: This study utilized qualitative interviews and self-reported data. Future research could incorporate quantitative longitudinal tracking to measure the exact correlation between CAR frequency and standardized student achievement scores over multiple years.
- b. Digital Tools & AI Integration: Given that student distraction from electronic devices emerged as a key trigger for CAR, future studies should explore how teachers can leverage digital analytics and AI-assisted educational tools to streamline CAR data collection and observation analysis.
- c. Policy Impact Evaluation: Investigation into how district-level policies incentivize collaborative CAR teams versus individual submissions would provide deeper management insights.(Osher et al., 2025)

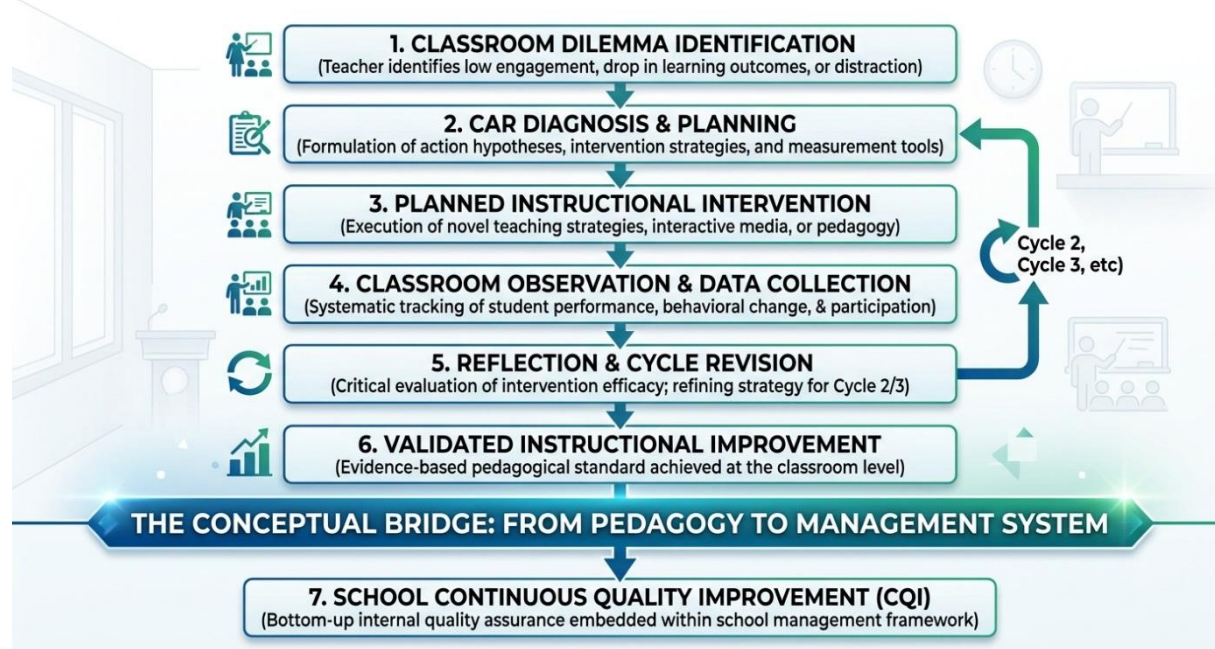
In summary, Classroom Action Research is an irreplaceable, authentic self-evaluation tool at the primary education level. It bridges the gap between abstract pedagogical theory and the immediate, dynamic realities of modern classrooms. By empowering teachers as researchers and utilizing CAR as an early warning quality management system, educational institutions can foster a sustainable culture of academic excellence.(Stratton et al., 2022)

The theoretical contribution of this study, it is necessary to explicitly differentiate between CAR as a localized research methodology and CAR as a micro-level school quality assurance mechanism.

1. CAR as a Classroom Methodology (Empirical Phenomenon). From the lived experiences of the participants (\$N=20\$), CAR is primarily understood and practiced as a reflective practitioner tool. Teachers experience the cycle (*identify problem* $\rightarrow$ *plan intervention* $\rightarrow$ *observe* $\rightarrow$ *reflect*) as a personal and pedagogical response to immediate classroom dilemmas, such as declining student grades or low engagement. This represents the direct empirical baseline established by the data.
2. CAR as an Educational Quality Assurance Mechanism (Conceptual Translation). Extrapolating from these lived experiences, this study proposes a

conceptual framework: when systematically embedded across classrooms, individual CAR cycles aggregate into a bottom-up, micro-level Continuous Quality Improvement (CQI) system. While individual teachers execute CAR to solve isolated learning problems, educational administrators and managers can harness these reflective cycles as internal quality assurance (IQA) loops. Instead of relying solely on top-down external audits, school quality is continuously monitored and upgraded at the micro-level through teacher-led research cycles.

Conceptual Diagram: Integration of CAR into School Quality Assurance. Below is the proposed conceptual model illustrating the transition from classroom-level problem solving to institutional Continuous Quality Improvement (CQI):



Our empirical findings confirm the established consensus that Classroom Action Research functions as a systematic, reflective cycle (*plan $\rightarrow$ act $\rightarrow$ observe $\rightarrow$ reflect*) that enhances instructional quality (Hikmawati et al., 2025; Rahayu & Saskia, 2025). In line with previous studies, teachers in this inquiry acknowledged CAR as a vital instrument for self-reflection and instructional adaptation. When confronted with classroom dilemmas such as declining student performance or reduced engagement teachers utilize CAR to transition from conventional lecturing toward evidence-based pedagogical strategies.

While existing literature predominantly conceptualizes CAR as an isolated professional development tool for individual practitioners (Kemmis & McTaggart, 2007; Pramswari, 2016), this study adds a novel managerial perspective. We propose that localized CAR cycles, when systematically aggregated across classrooms, function as a micro-level continuous quality improvement (CQI) system for school management. Rather than relying solely on top-down administrative audits, school quality is continuously monitored and refined from the bottom up through data-driven teacher reflections. This conceptual translation bridges the gap between micro-level classroom intervention and macro-level institutional quality assurance.

Where this study diverges from traditional optimistic frameworks of action research is its emphasis on acute structural workload competition. While studies such as Tomol (2025) and Jaminal (2026) highlight general resource constraints and research anxiety, our findings illuminate *why* implementation hesitation persists: CAR directly competes with teachers' immediate instructional, administrative, and classroom management responsibilities. For early-career educators (Maglupay & Mae, 2024), CAR is not experienced merely as a "demanding task," but as a potential source of cognitive overload that threatens daily instructional delivery. Consequently, our findings demonstrate that top-down mandates for frequent CAR execution are counterproductive. Instead, sustained engagement requires institutional scaffolding specifically, structured peer mentorship, standardized templates, and a participant-perceived feasible cadence of once per semester.

Analytical Dimension	Prior Literature Findings	Current Study Findings	Synthesis & Scholar Distinction
Core Function of CAR	Individual reflective practice and professional service (Hikmawati et al., 2025; Rahayu & Saskia, 2025).	Integrated mechanism for classroom problem-solving and micro-level school quality management.	Adds: Elevates CAR from an isolated teacher activity to an institutional Continuous Quality Improvement (CQI) loop.
Implementation Constraints	General methodological constraints, lack of research literacy, and insufficient incentives (Pramswari, 2016; Jaminal, 2026).	Direct operational competition between research rigor and daily classroom/administrative workload.	Diverges & Explains Why: Non-execution stems from role-adaptation pressures and cognitive overload, particularly among early-career teachers.
Feasibility & Cadence	Unspecified or normative research frequency expectations.	Feasible execution cadence perceived by participants as strictly once per semester.	Reframes: Replaces prescriptive claims with a realistic operational rhythm that prevents burnout and administrative formalism.
Institutional Scaffolding	Focus on leadership support and external funding access (Tomol, 2025).	Need for structured peer mentorship, capacity-building workshops, and collaborative rotation models.	Refines: Emphasizes that technical guidance and peer pairing are crucial to demystify research mechanics for hesitant practitioners.

CONCLUSION

This study concludes that the implementation of Classroom Action Research (CAR) has been internalized by the majority of participating elementary school teachers ($n=18$) as a practical, needs-based reflection tool, while methodological challenges faced primarily by novice teachers ($n=2$) were effectively mitigated through technical training and peer mentorship. Strategically, participants' experiences suggest that CAR can function as a micro-level early warning and self-evaluation mechanism for improving instructional quality, empowering educators as reflective practitioner-researchers capable of responding precisely to dynamic student learning needs. The consistent execution of CAR yields double-loop benefits: at the individual level, it enhances teacher competency, career development, and instructional innovation; at the institutional level, it fosters a culture of collaborative knowledge sharing, continuous quality improvement (CQI), and public trust. To sustain these benefits without inducing administrative overload, participants identified once per semester as the most operationally feasible implementation frequency. Realizing this balance requires proactive leadership support from school principals through structured mentorship frameworks, institutional resource allocation, and collaborative team-based research models.

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Data availability: The qualitative data supporting the findings of this study (such as raw interview transcripts) are not publicly available to protect the privacy, anonymity, and confidentiality of the research participants (SD/MI teachers). However, anonymized data summaries are available from the corresponding author upon reasonable request for legitimate academic purposes.

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