

ENHANCING INSTITUTIONAL PERFORMANCE THROUGH EDUCATIONAL QUALITY MANAGEMENT BASED ON THE PLAN DO CHECK ACT (PDCA) CYCLE

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Abstrak

Penelitian ini bertujuan menganalisis implementasi manajemen mutu pendidikan berbasis *Plan–Do–Check–Act* (PDCA) dalam meningkatkan kinerja kelembagaan di MAS Al Ittihadiyah Bromo Medan. Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus yang melibatkan kepala madrasah, wakil kepala madrasah, guru, tenaga kependidikan, komite madrasah, serta dokumen kelembagaan sebagai sumber data. Data dikumpulkan melalui observasi, wawancara semi-terstruktur, dan analisis dokumen, kemudian dianalisis menggunakan tahapan reduksi data, penyajian data, dan penarikan kesimpulan, dengan keabsahan data dijamin melalui triangulasi sumber dan teknik. Hasil penelitian menunjukkan bahwa peningkatan kinerja kelembagaan didukung oleh penerapan siklus PDCA secara sistematis melalui perencanaan strategis, pelaksanaan program, pemantauan, evaluasi, dan perbaikan berkelanjutan. Tahap perencanaan menunjukkan meningkatnya partisipasi pemangku kepentingan dan orientasi strategis, sedangkan tahap pelaksanaan mencerminkan tata kelola yang kolaboratif serta layanan pendidikan yang berorientasi pada mutu. Namun, perencanaan berbasis data, indikator kinerja yang terstandar, sistem dokumentasi, infrastruktur digital, dan mekanisme tindak lanjut masih perlu diperkuat untuk mengoptimalkan efektivitas kelembagaan. Penelitian ini menyimpulkan bahwa PDCA merupakan kerangka manajemen mutu yang efektif dalam mendorong perbaikan organisasi secara berkelanjutan, memperkuat akuntabilitas, mendukung pengambilan keputusan berbasis data, serta meningkatkan kinerja kelembagaan dan mutu pendidikan pada madrasah aliyah.

Kata Kunci: Manajemen Mutu Pendidikan, Siklus PDCA, Kinerja Kelembagaan

Abstract

This study examines the implementation of Plan–Do–Check–Act (PDCA)-based educational quality management in improving institutional performance at MAS Al Ittihadiyah Bromo Medan. The study employed a qualitative case study design involving the principal, vice principals, teachers, administrative staff, school committee members, and relevant institutional documents. Data were collected through observations, semi-structured interviews, and document analysis, and analyzed using data reduction, data display, and conclusion drawing, while credibility was ensured through source and technique triangulation. The findings reveal that institutional performance improvement is supported by the systematic implementation of the PDCA cycle across strategic planning, program implementation, monitoring, evaluation, and continuous improvement. The planning stage demonstrates increasing stakeholder participation and strategic orientation, while implementation reflects collaborative governance and quality-focused educational services. However, evidence-based planning, standardized performance indicators, documentation systems, digital infrastructure, and follow-up mechanisms require further strengthening to optimize institutional effectiveness. The study concludes that PDCA functions as an effective quality management framework for fostering continuous organizational improvement, strengthening accountability, promoting data-driven decision-making, and enhancing the institutional performance and educational quality of Islamic senior high schools.

Keywords: Educational Quality Management, PDCA Cycle, Institutional Performance

INTRODUCTION

Education at the madrasah level holds a strategic role in developing excellent students who are academically proficient, religiously grounded, and socially competent. As formal Islamic educational institutions in Indonesia, madrasahs are uniquely characterized by the integration of Islamic values within their core curriculum. Consequently, they are required not only to administer standard learning processes but also to demonstrate institutional governance that is effective, accountable, and oriented toward continuous quality improvement. This demand aligns perfectly with the macro-level regulations established by the Ministry of Religious Affairs and institutional policies that emphasize expanding access, enhancing quality, boosting competitiveness, and ensuring educational relevance. In the context of the national education system, educational quality refers to the National Education Standards as the minimum criteria that must be fulfilled by every educational unit. These quality standards comprehensively encompass graduate competence, content, process, assessment, educators, administrative staff, infrastructure, management, and financing. Government regulations, specifically Government Regulation Number 57 of 2021 and its subsequent amendment in Government Regulation Number 4 of 2022, explicitly state that the National Education Standards serve as the operational foundation for organizing, developing, monitoring, evaluating, and reporting educational quality. The achievement of these standards requires educational institutions to adopt comprehensive quality management systems that emphasize continuous improvement and organizational excellence (Goetsch & Davis, 2016; Oakland, 2014; Sallis, 2014).

High-quality education is inherently a direct reflection of optimized institutional performance. In Islamic educational management, institutional performance is evaluated through an organization's capacity to plan strategic programs, manage available resources, execute effective learning processes, cultivate a competitive work culture, evaluate predetermined achievements, and implement structured follow-up actions. In the Islamic paradigm, this management process aligns with the principle of *itqan* (continuous strive for perfection) and *amanah* (accountability), where every administrative effort is viewed both as a professional obligation and a form of worship. In practice, however, many madrasahs face persistent institutional bottlenecks. These include program planning that is not entirely data-driven, inconsistent program execution, weak inter-departmental coordination, suboptimal monitoring systems, and a lack of decisive follow-up on evaluation results. When these issues persist, quality improvement programs degenerate into mere administrative routines, failing to yield any substantial impact on the actual performance of the institution. Studies on Total Quality Management in education have consistently demonstrated that sustainable educational quality depends on systematic planning, continuous implementation, rigorous evaluation, and corrective actions embedded within institutional management (Andary et al., 2024; Dasuki et al., 2025; Munifah et al., 2025). Contemporary educational evaluation policies heavily emphasize utilizing school profile data and educational report cards as the primary basis for quality planning. Therefore, a systematic and continuous quality management framework must be established at the institutional level to bridge the gap between regulatory ideals and operational realities.

MAS Al Ittihadiyah Bromo Medan, an Islamic senior high school operating under the auspices of the Al Ittihadiyah Islamic organization, urgently needs to strengthen its quality management system to systematically elevate its institutional performance. Preliminary observations indicate that the school's overall performance requires structured intervention, as evidenced by several operational vulnerabilities. One prominent indicator is the stagnant growth in new student enrollment over the past few consecutive

years. This condition strongly implies that the institution's public appeal and marketing strategies remain weak. To counter this, the madrasah must urgently enhance its educational services, reinforce its institutional branding, and implement a well-targeted public relations strategy. Public trust and competitive advantage are inherently tied to the perceived quality of the institution (Sallis, 2014; Goetsch & Davis, 2016). Furthermore, the infrastructure at MAS Al Ittihadiyah Bromo Medan requires serious upgrading. The physical learning environment, classrooms, library, laboratories, and information technology devices are currently insufficient to fully support modern pedagogy. Empirical observations reveal that classrooms lack adequate climate control, digital projectors are not readily available for daily teaching, laboratories remain underdeveloped, and instructional media has not been fully digitalized. These physical deficiencies directly disrupt student comfort, hinder teacher creativity, and ultimately lower the overall standard of educational delivery.

Beyond infrastructural limitations, the core institutional management at MAS Al Ittihadiyah Bromo Medan requires deep structural reform across the planning, execution, evaluation, and follow-up phases. While various work programs are carried out annually, they generally lack measurable key performance indicators, rigorous documentation, and systematic periodic evaluations. Without data-driven decision-making, a genuine culture of quality cannot thrive, leaving programs as superficial administrative exercises. It is highly difficult for school leaders to identify priority problems when internal institutional data is poorly documented and inaccurate. This operational environment underscores the critical need for a cyclical, data-centered quality management approach. Research has shown that the PDCA cycle provides a structured mechanism for strengthening institutional governance through evidence-based planning, systematic implementation, periodic evaluation, and continuous improvement (Istiqomah et al., 2024; Astrellita & Bulqis, 2025; Hasnawi et al., 2026). Additionally, improving human resource professionalism is a vital priority. Teachers serve as the vanguard of educational delivery, meaning their pedagogical, professional, social, and personal competencies must be developed continuously through structured academic supervision, clinical training in innovative teaching methods, and objective performance appraisals. School leadership and quality management practices also play a significant role in enhancing teacher professionalism and institutional learning communities (Purwanti & Khoeriah, 2026). On the administrative side, the madrasah must digitalize its document archiving, activity reporting, and program monitoring to eliminate inefficiencies. Ineffective administrative governance inevitably dilutes institutional accountability, resulting in poor readiness for national accreditation and a subsequent decline in public trust.

Addressing these systemic challenges cannot be achieved through isolated, routine annual programming; it requires the active, coordinated participation of all stakeholders, including the headmaster, teachers, staff, students, school committees, parents, and the broader community. To synchronize these moving parts, the most viable and appropriate managerial intervention for the madrasah today is the institutionalization of the Plan-Do-Check-Act (PDCA) cycle. Originally introduced through the quality control concepts developed by Shewhart (1939) and later refined by Deming (1986), the PDCA cycle has become one of the most widely adopted continuous improvement models across diverse organizational contexts (Oakland, 2014). The PDCA cycle provides a rigorous, continuous improvement framework that treats quality as an ongoing process rather than a static goal. Its effectiveness has been validated not only in educational settings (Trisnantari & Jannah, 2025; Islami et al., 2025; Candra & Nurfitriyanti, 2025) but also in healthcare and public service organizations, demonstrating its adaptability and effectiveness in improving organizational performance (Bereskie et al., 2017; Lai et al.,

2022; Nakazawa et al., 2020; Shi & Xu, 2025). In the context of Islamic educational management, the application of PDCA operationalizes the values of self-reflection (*mubasabah*) and collective deliberation (*syura*). By employing the PDCA cycle, MAS Al Ittihadiyah Bromo Medan can effectively transform its strategic planning, optimize its instructional and administrative workflows, establish rigorous internal monitoring systems, and formulate targeted corrective actions. Consequently, this study aims to comprehensively analyze how the implementation of the PDCA quality management cycle can resolve operational inefficiencies and systematically improve institutional performance at MAS Al Ittihadiyah Bromo Medan.

RESULTS AND DISCUSSIONS

The findings indicate that institutional performance improvement at MAS Al Ittihadiyah Bromo Medan is inseparable from the implementation of educational quality management that systematically integrates the stages of planning, implementation, evaluation, and continuous improvement within the Plan–Do–Check–Act (PDCA) framework. Institutional performance is not merely reflected in administrative compliance or academic achievement but also in the organization's capacity to continuously improve managerial processes, educational services, stakeholder participation, and organizational effectiveness. The findings demonstrate that the sustainability of institutional development depends on the consistency with which quality management principles are embedded into daily managerial practices. This confirms that educational quality management should be understood as a continuous organizational process rather than a series of isolated administrative activities. This finding is consistent with the quality management philosophy proposed by Deming (1986), Sallis (2014), and Goetsch and Davis (2016), who argue that organizational excellence is achieved through continuous improvement rather than one-time interventions. Similar conclusions have also been reported by Andary et al. (2024), Dasuki et al. (2025), and Munifah et al. (2025), who found that educational institutions implementing Total Quality Management through the PDCA cycle demonstrate stronger organizational performance and more sustainable quality improvement.

The study further reveals that MAS Al Ittihadiyah Bromo Medan has established an institutional foundation that supports the implementation of quality management. The school possesses a formal organizational structure with clearly defined lines of authority and responsibility, enabling each stakeholder to perform duties according to their professional competencies. Leadership responsibilities are distributed among the principal, vice principals, teachers, and administrative personnel, thereby facilitating coordination and accountability across organizational units. Annual operational programs, instructional activities, religious development programs, student affairs, and administrative services are implemented through collaborative participation involving teachers, educational staff, and school committees. Such organizational arrangements demonstrate the existence of governance mechanisms that support institutional effectiveness and create an environment conducive to continuous quality improvement. These organizational characteristics correspond with Oakland's (2014) assertion that effective quality management requires clearly defined organizational roles and coordinated managerial processes. Likewise, Purwanti and Khoeriah

(2026) emphasize that strong school leadership and collaborative management significantly strengthen institutional quality culture and teacher professionalism.

Nevertheless, field observations and interview findings indicate that institutional performance has not yet reached its optimal level because several quality management components remain insufficiently integrated. The most significant challenges were identified during the planning and evaluation stages. Strategic planning has generally been prepared based on institutional needs; however, several planning decisions continue to rely primarily on managerial experience rather than systematic evidence generated from institutional performance indicators. Data related to student achievement, teacher performance, infrastructure conditions, stakeholder satisfaction, and graduate outcomes have not been fully utilized as the basis for strategic decision-making. Consequently, several development programs tend to focus on short-term operational priorities rather than long-term institutional quality objectives. These findings reinforce the argument of Hasnawi et al. (2026) that the effectiveness of the PDCA cycle depends heavily on the availability of reliable institutional data throughout every stage of planning, implementation, monitoring, and improvement. Similar observations were reported by Astrellita and Bulqis (2025), who concluded that educational institutions frequently experience weaknesses during the planning phase due to limited utilization of performance-based evidence.

The findings also reveal that educational facilities and infrastructure require continuous improvement to support increasingly complex learning demands. Although the school has gradually invested in classroom facilities, multimedia equipment, and learning resources, the availability of educational technology remains uneven across classrooms. Administrative documentation also requires further strengthening to ensure that institutional activities are properly recorded, monitored, and evaluated. Documentation is essential because it serves not only as evidence of accountability but also as organizational knowledge that supports continuous learning and future planning. Likewise, program evaluation has not yet been implemented through standardized quality indicators that consistently measure program effectiveness and institutional outcomes. As a result, corrective actions occasionally depend on situational judgments rather than comprehensive evaluation findings. The importance of standardized documentation and continuous evaluation is strongly emphasized within the PDCA framework because quality improvement relies on measurable evidence that supports corrective decision-making (Shewhart, 1939; Deming, 1986). Comparable findings have also been reported by Istiqomah et al. (2024), who found that systematic evaluation through PDCA strengthens academic quality assurance, and by Trisnantari and Jannah (2025), who demonstrated that the Deming Cycle enhances school quality assurance systems through structured documentation and follow-up actions.

Within the PDCA framework, the planning (Plan) stage demonstrates encouraging progress. The school has formulated annual strategic programs focusing on increasing student enrollment, improving educational facilities, strengthening administrative systems, enhancing teacher discipline, improving instructional quality, and expanding extracurricular and religious activities. These strategic priorities reflect the institution's awareness that educational quality cannot be improved solely through classroom instruction but must involve comprehensive organizational

development. Recruitment strategies for new students have become increasingly systematic through direct promotional visits to partner junior secondary schools, collaboration with surrounding communities, dissemination of institutional achievements, and optimization of digital communication platforms and social media. These promotional efforts have strengthened institutional visibility, increased public trust, and contributed to a more competitive institutional image within the local educational landscape. This finding aligns with Sallis (2014), who argues that educational quality should encompass every aspect of organizational services, including stakeholder satisfaction and institutional reputation. Similarly, Andary et al. (2024) emphasize that quality-oriented strategic planning significantly contributes to institutional competitiveness and public confidence.

Planning activities also demonstrate increasing responsiveness toward educational transformation in the digital era. Institutional development plans include gradual modernization of learning facilities, integration of digital technologies into classroom instruction, and enhancement of technological infrastructure supporting educational administration. The school has prioritized the procurement of multimedia projectors, optimization of laboratory facilities, expansion of internet connectivity, and utilization of digital learning resources to create more interactive and student-centered learning environments. These initiatives illustrate that institutional leaders recognize technological readiness as an important determinant of educational competitiveness and service quality. However, the effectiveness of technological investment depends not only on equipment availability but also on teachers' digital competence and their ability to integrate technology into meaningful pedagogical practices. The necessity of integrating technological resources with human resource development is also highlighted by Goetsch and Davis (2016), who contend that quality improvement requires balanced investment in infrastructure, organizational systems, and employee competencies. Furthermore, Candra and Nurfitriyanti (2025) demonstrate that PDCA-based quality management successfully supports the integration of innovative learning approaches and educational technologies within Islamic educational institutions.

Another important finding concerns the alignment between planning activities and institutional quality culture. Planning is increasingly conducted through coordination meetings involving multiple stakeholders, enabling teachers and educational staff to contribute ideas regarding institutional priorities. Such participatory planning strengthens organizational commitment because stakeholders perceive themselves as active contributors rather than passive implementers of managerial decisions. Nevertheless, opportunities remain to further institutionalize evidence-based planning through the systematic analysis of performance data, stakeholder feedback, accreditation recommendations, and internal quality assurance reports. Integrating these information sources would enable management to formulate more measurable objectives, prioritize resource allocation, and establish realistic performance indicators for continuous monitoring. These findings support the conclusions of Islami et al. (2025), who found that participatory planning and collaborative decision-making strengthen the effectiveness of PDCA implementation in secondary education. Moreover, Hasnawi et al. (2026) argue that organizational learning and continuous quality improvement are

most effective when planning decisions are consistently informed by institutional evidence and stakeholder feedback rather than intuition alone.

Overall, the findings suggest that institutional performance improvement at MAS Al Ittihadiyah Bromo Medan has entered a constructive stage characterized by organizational commitment, collaborative governance, and increasing awareness of continuous quality improvement principles. However, the sustainability of these improvements requires stronger integration among all phases of the PDCA cycle. Planning should increasingly rely on institutional evidence; implementation should emphasize consistency and capacity development; evaluation should employ measurable performance indicators and systematic quality audits; and follow-up actions should become institutionalized through continuous improvement mechanisms rather than temporary corrective measures. Such integration would transform quality management from an administrative obligation into a sustainable organizational culture that continuously enhances educational quality, institutional effectiveness, stakeholder satisfaction, and the long-term competitiveness of the madrasah. In this regard, the PDCA cycle functions not merely as a managerial technique but as a strategic framework for building adaptive educational institutions capable of responding effectively to changing educational policies, technological advancements, and societal expectations while maintaining the distinctive values of Islamic education.

An important implication emerging from these findings is that the effectiveness of the PDCA cycle depends not only on the completion of each managerial stage but also on the degree of integration between institutional leadership, organizational culture, and stakeholder participation. The evidence gathered during this study indicates that leadership at MAS Al Ittihadiyah Bromo Medan has played a significant role in coordinating institutional programs and encouraging collaboration among teachers and educational staff. However, sustaining institutional quality requires leadership practices that extend beyond administrative coordination toward transformational leadership capable of motivating innovation, facilitating professional learning, and fostering a shared commitment to continuous improvement. Such leadership encourages every member of the organization to perceive quality assurance as a collective responsibility rather than an obligation assigned solely to school administrators.

The findings further demonstrate that teacher participation represents one of the most influential factors supporting institutional performance improvement. Teachers are directly involved in planning instructional activities, implementing educational programs, monitoring student development, and providing feedback regarding institutional policies. This active participation contributes to stronger organizational ownership of quality improvement initiatives. Nevertheless, interview data also indicate that teachers continue to experience challenges associated with administrative workload, documentation requirements, and the integration of digital technologies into classroom instruction. These findings suggest that institutional quality management should be accompanied by continuous professional development programs focusing on instructional innovation, digital competence, educational assessment, and quality assurance practices. Strengthening teacher capacity not only improves classroom instruction but also enhances the institution's ability to implement organizational change successfully.

Another significant finding concerns the role of organizational communication in supporting the implementation of quality management. Regular coordination meetings, informal discussions, and collaborative decision-making have facilitated information sharing among stakeholders and reduced potential misunderstandings during program implementation. Effective communication also enables institutional leaders to identify operational problems at an early stage, allowing corrective actions to be implemented before they negatively affect educational services. However, communication mechanisms can be further strengthened by establishing systematic feedback channels involving students, parents, alumni, and community representatives. Such feedback would provide valuable evidence regarding stakeholder expectations and satisfaction, thereby enriching institutional decision-making and supporting more responsive educational services.

The evaluation stage of the PDCA cycle also highlights the importance of establishing measurable institutional performance indicators. The findings reveal that evaluation activities have primarily focused on monitoring program implementation and administrative completion, while outcome-based indicators related to learning quality, graduate competencies, stakeholder satisfaction, and organizational effectiveness have not yet been comprehensively integrated into the evaluation system. Consequently, institutional leaders may encounter difficulties in determining whether implemented programs have generated meaningful improvements in educational quality. Developing a comprehensive quality assurance framework with clearly defined key performance indicators would enable the institution to measure progress objectively, compare achievements across academic years, and identify priority areas requiring further intervention.

Furthermore, the sustainability of continuous improvement is closely associated with the institution's ability to transform evaluation findings into organizational learning. The PDCA cycle emphasizes that evaluation should not represent the final stage of quality management but rather become the foundation for subsequent planning and innovation. The findings indicate that follow-up actions have generally been implemented after program evaluations; however, documentation of corrective measures and monitoring of their long-term effectiveness remain limited. Institutional learning would be significantly strengthened if evaluation reports, improvement plans, and implementation outcomes were systematically documented and disseminated among organizational members. Such practices would create an institutional memory that supports evidence-based planning, reduces the repetition of previous mistakes, and facilitates the adoption of successful managerial innovations.

Overall, these findings reinforce the view that institutional performance improvement is a multidimensional process requiring alignment among strategic planning, effective leadership, professional capacity development, participatory governance, data-driven decision-making, and continuous organizational learning. The implementation of the PDCA cycle at MAS Al Ittihadiyah Bromo Medan demonstrates considerable potential to establish a sustainable quality culture; however, its long-term effectiveness depends on the institution's commitment to embedding continuous improvement principles into every aspect of educational governance. By strengthening the interconnectedness of planning, implementation, evaluation, and corrective action, the madrasah

will be better positioned to enhance educational quality, respond to emerging challenges, and maintain institutional excellence within an increasingly dynamic educational environment.

CONCLUSIONS

This study concludes that the implementation of educational quality management based on the Plan–Do–Check–Act (PDCA) cycle has significantly contributed to strengthening institutional performance at MAS Al Ittihadiyah Bromo Medan. The findings demonstrate that the PDCA framework provides a systematic approach for integrating strategic planning, program implementation, continuous evaluation, and corrective actions into a sustainable quality improvement process. The planning stage enables the institution to establish clear priorities and measurable objectives, while the implementation stage facilitates the execution of educational programs, infrastructure development, and initiatives aimed at improving teaching quality. Furthermore, the evaluation stage allows institutional leaders to monitor program effectiveness, identify operational challenges, and assess progress toward organizational goals. These evaluation results subsequently inform corrective actions that promote continuous organizational learning and institutional development. Although challenges remain, particularly regarding infrastructure, data-based planning, administrative documentation, and the optimization of digital technology, the study indicates that strong leadership commitment, collaborative stakeholder participation, and a shared quality culture have become important drivers of institutional improvement. Therefore, sustaining institutional performance requires strengthening evidence-based decision-making, expanding digital administrative systems, enhancing teacher professional development, and institutionalizing continuous quality assurance practices. Collectively, these efforts will enable the madrasah to improve educational quality, strengthen organizational effectiveness, and maintain its competitiveness while responding adaptively to changing educational demands and societal expectations.

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