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Strengthening the Integration of Internal and External Quality Assurance Systems in Indonesian Higher Education: Toward a Sustainable Culture of Quality

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ABSTRAK

Tujuan penelitian ini adalah untuk menganalisis struktur, implementasi, dan interelasi antara Sistem Penjaminan Mutu Internal (SMI) dan Sistem Penjaminan Mutu Eksternal (SEM) di lembaga pendidikan tinggi Indonesia. Sistem ini, yang diamanatkan oleh Undang-Undang No. 12 tahun 2012, sangat penting untuk memastikan peningkatan berkelanjutan, akuntabilitas, dan daya saing dalam pendidikan tinggi nasional. Makalah ini bertujuan untuk memberikan pemahaman yang komprehensif tentang kedua sistem, landasan regulasinya, mekanisme operasional, dan tantangan dalam implementasinya, serta untuk mengusulkan rekomendasi strategis untuk meningkatkan sinergi mereka. Bahan dan metode. Penelitian ini menerapkan pendekatan tinjauan pustaka sistematis dengan mengumpulkan dan menganalisis peraturan nasional, dokumen kebijakan kelembagaan, dan publikasi ilmiah terkini yang terkait dengan penjaminan mutu pendidikan tinggi. Proses peninjauan melibatkan identifikasi, pengklasifikasian, dan sintesis literatur berdasarkan tema-tema utama seperti konsep mutu, kerangka hukum, mekanisme operasional, dan praktik kelembagaan. Data dianalisis secara tematis untuk mengungkap pola, kesenjangan, dan praktik terbaik dalam pelaksanaan SMI dan SEM di seluruh universitas di Indonesia. Hasil. Temuan menunjukkan bahwa IQAS berfungsi sebagai mekanisme internal otonom yang dirancang untuk memastikan peningkatan mutu berkelanjutan melalui siklus PPEPP (Penetapan, Implementasi, Evaluasi, Pengendalian, dan Peningkatan). Di sisi lain, EQAS berfungsi sebagai proses validasi eksternal yang dilakukan oleh badan akreditasi seperti BAN-PT dan LAM. Meskipun perannya saling melengkapi, kedua sistem menghadapi tantangan termasuk komitmen kepemimpinan, keterbatasan sumber daya, formalisme administratif, dan integrasi yang terfragmentasi. Hubungan sinergis antara IQAS dan EQAS mendorong budaya mutu yang berkelanjutan dan keunggulan institusi. Kesimpulan. Studi ini menyimpulkan bahwa efektivitas penjaminan mutu di pendidikan tinggi Indonesia bergantung pada komitmen institusi, kompetensi sumber daya manusia, dan harmonisasi mekanisme internal dan eksternal. Penguatan sistem informasi mutu berbasis digital, manajemen berbasis risiko, dan kolaborasi antarlembaga sangat penting untuk membangun budaya peningkatan mutu berkelanjutan dan mencapai daya saing global.

Kata Kunci: Penjaminan mutu; pendidikan tinggi; IQAS; EQAS; akreditasi; budaya mutu

ABSTRACT

The study purpose was to analyze the structure, implementation, and interrelation between the Internal Quality Assurance System (IQAS) and the External Quality Assurance System (EQAS) in Indonesian higher education institutions. These systems, mandated by Law No. 12 of 2012, are fundamental to ensuring continuous improvement, accountability, and competitiveness in national higher education. This paper aims to provide a comprehensive understanding of both systems, their regulatory foundations, operational mechanisms, and challenges in implementation, as well as to propose strategic recommendations for enhancing their synergy. Materials and methods. This study applied a systematic literature review approach by collecting and analyzing national regulations, institutional policy documents, and recent scholarly publications related to higher education quality assurance. The review process involved identifying, classifying, and synthesizing literature based on key themes such as quality concepts, legal frameworks, operational mechanisms, and institutional practices. Data were analyzed thematically to reveal patterns, gaps, and best practices in the execution of IQAS and EQAS across Indonesian universities. Results. The findings indicate that IQAS functions as an autonomous internal mechanism designed to ensure continuous quality improvement through the PPEPP cycle (Setting, Implementation, Evaluation, Control, and Improvement). EQAS, on the other hand, serves as an external validation process conducted by accrediting bodies such as BAN-PT and LAM. Despite their complementary roles, both systems face challenges including leadership commitment, limited resources, administrative formalism, and fragmented integration. A synergistic relationship between IQAS and EQAS fosters a sustainable quality culture and institutional excellence.Conclusions. The study concludes that the effectiveness of quality assurance in Indonesian higher education depends on institutional commitment, human resource competence, and the harmonization of internal and external mechanisms. Strengthening digital-based quality information systems, risk-based management, and inter-institutional collaboration is essential to building a culture of continuous quality improvement and achieving global competitiveness.

Keywords: Quality assurance; higher education; IQAS; EQAS; accreditation; quality culture

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INTRODUCTION

Higher education plays a pivotal role in national development, serving as both an intellectual foundation and an engine for innovation, competitiveness, and social progress (Altbach & Salmi, 2011). In the era of globalization and the Fourth Industrial Revolution (Industry 4.0), the capacity of higher education institutions (HEIs) to produce graduates who are creative, adaptive, and technologically proficient determines the competitive advantage of a nation. According to Harvey and Green (1993), educational quality in universities encompasses not only academic achievement but also institutional processes that ensure relevance, efficiency, and sustainability in responding to the dynamic needs of society. The acceleration of global change, digital transformation, and market demands requires universities to continually evaluate and improve the quality of teaching, research, and community service through systematic and measurable mechanisms. Without strong quality assurance systems, higher education institutions risk becoming misaligned with societal and economic priorities, failing to meet the expectations of stakeholders and losing their relevance in the global academic landscape (Sallis, 2012).

Ensuring educational quality in higher education requires a structured and sustainable framework for continuous improvement, a principle long emphasized in total quality management (TQM) and educational governance literature (Deming, 1986; Goetsch & Davis, 2014). In Indonesia, this framework is institutionalized through the Higher Education Quality Assurance System (Sistem Penjaminan Mutu Pendidikan Tinggi or SPM Dikti), as mandated by Law No. 12 of 2012 on Higher Education. The SPM Dikti consists of two interdependent subsystems: the Internal Quality Assurance System (IQAS or SPMI) and the External Quality Assurance System (EQAS or SPME). These systems are designed to ensure that higher education institutions achieve compliance with national standards while fostering continuous institutional improvement. The Ministry of Education, Culture, Research, and Technology (Kemendikbudristek, 2020) defines higher education quality as the degree to which an institution meets the National Standards for Higher Education (Standar Nasional Pendidikan Tinggi or SN-Dikti) across eight dimensions: graduate competencies, learning content, learning processes, assessment, academic staff, infrastructure, management, and financing.

Despite the existence of a robust regulatory framework, implementation of quality assurance remains inconsistent across institutions. Studies by LLDIKTI Wilayah III (2021) and Hudaya, Isnaningrum, and Suhendra (2025) found that while leading universities in major cities demonstrate mature quality management systems, smaller or regional institutions struggle with limited resources,

underqualified staff, and insufficient infrastructure. Many universities adopt quality assurance mechanisms merely as administrative compliance to meet accreditation requirements rather than as instruments for fostering a genuine culture of quality (quality culture). This formalistic tendency often reduces quality assurance to documentation exercises—focusing on reports, audits, and forms—rather than on strategic quality enhancement processes (Harvey & Newton, 2007). Consequently, the goal of developing a continuous improvement mindset is often overshadowed by the pursuit of accreditation labels and rankings (Tjiptono & Diana, 2016).

One of the central challenges lies in the misalignment and weak integration between internal and external quality assurance systems. Ideally, IQAS serves as the foundation upon which EQAS builds its evaluation. However, in practice, external accreditation processes—administered by the National Accreditation Board for Higher Education (BAN-PT) or various Independent Accreditation Agencies (LAM)—often function in isolation from the results of internal assessments. According to Ditjen Dikti (2019), this disconnects leads to inefficiencies, duplication of work, and excessive administrative burdens. Institutions are frequently required to reproduce data already compiled in internal reports, diverting time and resources from actual quality enhancement activities. Moreover, differences in interpretation between internal and external standards create uncertainty and reduce the coherence of institutional quality policies.

Addressing these challenges necessitates a shift from compliance-oriented quality assurance to an integrated, evidence-based, and risk-aware approach. Goetsch and Davis (2014) argue that effective quality assurance must be embedded within institutional management systems, emphasizing continuous reflection, accountability, and improvement. The Ministry of Education and Culture (Kemendikbud, 2020) further advocates for harmonizing internal and external mechanisms through data integration with the Higher Education Database (Pangkalan Data Pendidikan Tinggi or PD-Dikti). Such alignment enables real-time monitoring, enhances transparency, and strengthens decision-making processes. From a governance perspective, synergy between IQAS and EQAS is essential for ensuring that quality assurance functions as a feedback loop—where internal evaluation informs external validation, and accreditation outcomes drive internal reform (Harvey & Newton, 2007).

Recent studies highlight the importance of leadership commitment and institutional culture as determinants of quality assurance success. Hudaya et al. (2025) emphasize that quality assurance cannot rely solely on written policies; it must be institutionalized as a shared belief and routine practice among all stakeholders. Similarly, Altbach and Salmi (2011) argue that world-class universities are characterized not only by academic excellence but also by strong internal management systems that integrate quality assurance into their strategic planning. In Indonesia, universities such as Institut Teknologi Sepuluh Nopember (ITS, 2024) and Universitas Gadjah Mada have adopted risk-based IQAS models that prioritize high-impact areas such as graduate employability, research productivity, and community

engagement. This risk-based framework enhances resource efficiency and allows institutions to anticipate and mitigate potential threats to quality outcomes.

Despite these innovations, several systemic barriers persist. Many higher education institutions still lack qualified internal auditors and trained quality managers, leading to superficial internal audits and weak follow-up mechanisms (LLDIKTI Wilayah III, 2021). Funding constraints further limit the capacity of universities to invest in quality information systems, professional development, and infrastructure. Moreover, the rapid evolution of higher education policy—such as the transition from the Indonesian National Qualifications Framework (KKNI) to outcome-based education models—requires adaptive quality systems that can respond to new accreditation standards without disrupting institutional stability (Permendikbudristek, 2023).

A review of the existing literature reveals that while numerous studies have explored the theoretical foundations and operational aspects of IQAS and EQAS, limited research has examined their interaction and integration within the Indonesian context. For instance, Gunawan (2017) and Ditjen Dikti (2018) provide detailed policy analyses of quality assurance regulations but do not empirically assess the synchronization between internal and external systems. Similarly, Sallis (2012) and Gaspersz (2007) discuss the principles of continuous improvement and stakeholder satisfaction but do not contextualize these principles within Indonesia's dual quality assurance structure. This gap highlights the need for a more comprehensive and integrative analysis that addresses both conceptual and practical dimensions of IQAS–EQAS synergy.

Therefore, this study aims to fill that gap by systematically analyzing the internal and external quality assurance systems in Indonesian higher education. It explores their conceptual foundations, regulatory frameworks, operational mechanisms, and the interdependence between them. The novelty of this study lies in its holistic synthesis of literature and policy analysis to propose a model of harmonized IQAS–EQAS integration. This model emphasizes data-driven decision-making, leadership engagement, and a sustainable culture of quality improvement. By identifying key challenges and proposing evidence-based strategies—such as digital quality information systems, risk-based management, and inter-institutional collaboration—this research contributes to the discourse on quality assurance reform in Indonesia. Furthermore, it offers theoretical and practical implications for policymakers, accreditation agencies, and institutional leaders seeking to strengthen quality assurance frameworks that align with global best practices and support Indonesia's aspiration toward world-class higher education.

METHOD

This study employed a systematic literature review (SLR) approach to analyze the conceptual framework, implementation mechanisms, challenges, and strategic integration between the *Internal Quality Assurance System* (IQAS) and the *External Quality Assurance System* (EQAS) in Indonesian higher education

institutions. The systematic review design was chosen to ensure a comprehensive, transparent, and replicable process of collecting, evaluating, and synthesizing scholarly evidence. This methodological approach follows the guidelines proposed by Kitchenham and Charters (2007), which emphasize structured identification, selection, appraisal, and synthesis of relevant studies to generate integrative insights and theoretical advancement.

The research process was organized into four major stages: identification, screening, eligibility, and synthesis. During the identification stage, relevant literature was retrieved from credible electronic databases such as Google Scholar, ResearchGate, and Scopus, as well as from the official repositories of the Ministry of Education, Culture, Research, and Technology (*Kemendikbudristek*) and the Directorate General of Higher Education (*Ditjen Dikti*). Keywords used in the search included "Internal Quality Assurance System (IQAS)," "External Quality Assurance System (EQAS)," "higher education accreditation," "quality assurance in Indonesian universities," and "SPMI–SPME integration." To maintain relevance and recency, the review focused on literature published within the last 15 years (2010–2025), while also incorporating earlier foundational works such as those of Deming (1986), Harvey and Green (1993), and Sallis (2012) for theoretical grounding.

The screening stage involved evaluating the abstracts and keywords of 85 initially retrieved documents to assess their relevance to the research focus. After removing duplicates, non-scholarly sources, and studies unrelated to higher education quality assurance, 47 publications were retained for detailed review. These included journal articles, policy papers, government regulations, institutional quality assurance manuals, and accreditation guidelines. The inclusion criteria emphasized materials that provided conceptual, empirical, or regulatory insights into IQAS, EQAS, or their interrelation. Figure 1 illustrates the systematic selection process, following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram.

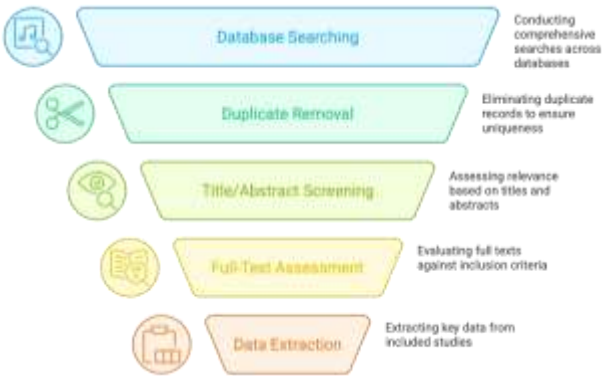


Figure 1. *Flowchart of the systematic literature review process following PRISMA guidelines.*

After selecting the relevant materials, the eligibility phase focused on evaluating the quality and credibility of the sources. Each publication was examined based on author expertise, institutional affiliation, methodological rigor, and the extent to which it contributed to understanding internal and external quality assurance mechanisms. Documents from the *Directorate General of Higher Education* (Ditjen Dikti, 2018; 2019), *BAN-PT* (2020), and *Kemendikbudristek* (2020; 2023) were prioritized as authoritative sources, given their policy relevance and regulatory authority.

Data extraction was conducted through a content analysis technique that categorized information into four thematic dimensions: (1) conceptual and theoretical perspectives on quality assurance, (2) regulatory frameworks governing IQAS and EQAS, (3) challenges and barriers in implementation, and (4) strategies and best practices for system integration. A data synthesis table (Table 1) was constructed to map the relationships among these dimensions, highlighting recurring concepts, convergent findings, and emergent research gaps.

Table 1. *Analytical framework and thematic dimensions used in the SLR.*

Thematic Dimension	Key Focus	Representative Sources
Conceptual foundations	Definitions, principles, and paradigms of quality assurance in higher education	Sallis (2012); Harvey & Green (1993); Deming (1986)
Regulatory frameworks	National policies and legal instruments supporting IQAS and EQAS	Law No. 12/2012; Permenristekdikti No. 62/2016; Permendikbudristek No. 53/2023
Implementation challenges	Institutional barriers, leadership issues, resource limitations	LLDIKTI (2021); Hudaya et al. (2025)
Integration and best practices	Models of IQAS–EQAS synergy, digital systems, and risk-based management	ITS (2024); Ditjen Dikti (2019); Kumparan Edu (2023)

Analytical synthesis was then performed through thematic analysis, integrating both inductive and deductive reasoning. Inductively, recurring ideas and operational issues emerging from various institutional reports were clustered to construct a conceptual understanding of the IQAS–EQAS relationship. Deductively, these findings were examined against existing frameworks of total quality management (TQM) and continuous improvement models (Goetsch & Davis, 2014; Gaspersz, 2007), enabling the identification of theoretical consistencies and contextual adaptations within Indonesian higher education.

Data triangulation was achieved by cross-referencing regulatory documents with empirical case studies and institutional quality manuals to ensure the validity and reliability of interpretations. This multi-source verification helped in distinguishing between normative expectations in policy documents and actual practices observed in institutional settings. The synthesis culminated in a descriptive-analytical narrative that elucidates the current state of quality assurance systems in Indonesia and highlights potential pathways for their harmonization.

Overall, this methodological framework ensures rigor and credibility by combining documentary analysis with thematic synthesis. It facilitates a systematic exploration of how internal and external quality assurance systems operate, interact, and evolve within Indonesia's higher education landscape. Through the integration of qualitative content analysis and structured review protocols, the study generates a coherent analytical foundation for understanding the dynamic interplay between IQAS and EQAS and for proposing strategic recommendations to strengthen quality governance and sustainability in higher education.

FINDING AND DISCUSSION

Finding

The findings of this study highlight the multidimensional relationship between the *Internal Quality Assurance System*(IQAS) and the *External Quality Assurance System* (EQAS) in Indonesian higher education. The analysis of forty-seven selected publications and policy documents demonstrates that both systems—while designed to complement each other—are often implemented with varying degrees of institutional understanding, commitment, and resource capacity. These findings reinforce the notion that quality assurance in higher education must be viewed as a dynamic, systemic, and culturally embedded process rather than a mere administrative formality (Sallis, 2012; Harvey & Green, 1993).

1. Conceptual Alignment and Theoretical Foundation

The literature reveals a strong theoretical foundation for the alignment of IQAS and EQAS through the principles of *Total Quality Management* (TQM) and *continuous improvement* (Deming, 1986; Goetsch & Davis, 2014). IQAS, implemented through the PPEPP cycle—*Penetapan (Setting)*, *Pelaksanaan (Implementation)*, *Evaluasi (Evaluation)*, *Pengendalian (Control)*, and *Peningkatan (Improvement)*—is conceptually derived from the PDCA model (*Plan–Do–Check–Act*) of Deming (1986), emphasizing iterative feedback and incremental improvement. EQAS, on the other hand, operates as an external validation mechanism conducted by accreditation agencies such as *BAN-PT* and *LAM* to ensure public accountability and alignment with national and international standards (BAN-PT, 2020; Permenristekdikti No. 62/2016).

The findings indicate that IQAS serves as the core internal mechanism that enables higher education institutions (HEIs) to autonomously regulate academic and managerial processes. According to Hudaya, Isnaningrum, and Suhendra (2025), IQAS acts as a "self-regulatory compass" that ensures institutional practices comply with the *National Standards for Higher Education* (*SN-Dikti*), while encouraging reflective improvement at every organizational level. In parallel, EQAS performs as a system of external accountability—evaluating, verifying, and legitimizing the performance outcomes of IQAS (Harvey & Newton, 2007). This dual structure is not unique to Indonesia; Altbach and Salmi (2011) observed that world-class universities globally combine internal quality assurance systems with external

audit mechanisms to balance autonomy with public trust. However, Indonesia's approach stands out for its formal integration of both systems under one regulatory framework, as codified in Law No. 12 of 2012.

2. Implementation Dynamics and Institutional Practices

The data analysis reveals considerable variation in the implementation of IQAS and EQAS across different types of higher education institutions. Public universities, particularly those with autonomous legal status (*Perguruan Tinggi Negeri Berbadan Hukum* or PTNBH), exhibit more sophisticated quality management systems, often supported by institutional quality units and digital monitoring tools (ITS, 2024; Ditjen Dikti, 2019). These institutions typically integrate their IQAS with data-driven management systems and continuous internal audits, creating a sustainable cycle of quality improvement. For instance, Institut Teknologi Sepuluh Nopember (ITS) and Universitas Gadjah Mada have adopted risk-based IQAS frameworks that prioritize quality risks in critical areas such as graduate employability, research impact, and stakeholder satisfaction (Kumparan Edu, 2023).

In contrast, smaller private universities and regional colleges face substantial challenges in implementing IQAS effectively. LLDIKTI Wilayah III (2021) notes that limited financial resources, inadequate infrastructure, and a shortage of trained internal auditors often result in fragmented or superficial quality assurance practices. Many institutions conduct internal audits and reporting primarily to satisfy external accreditation requirements rather than to genuinely improve institutional performance. This condition aligns with findings by Harvey and Newton (2007), who argue that when quality assurance is driven solely by external compliance, it tends to produce "ritualistic bureaucracy" rather than meaningful improvement.

3. Structural Integration of IQAS and EQAS

The review reveals that the integration of IQAS and EQAS remains one of the most persistent challenges in Indonesia's higher education quality ecosystem. Ideally, data and outcomes from internal quality audits should serve as primary evidence for external accreditation assessments. However, the lack of standardized data management systems and insufficient communication between internal quality units and external accreditation bodies has limited this integration. According to Ditjen Dikti (2018), the *Higher Education Database* (*Pangkalan Data Pendidikan Tinggi* or PD-Dikti) was designed to bridge this gap by providing a national repository for institutional quality data. Yet, its utilization varies greatly among institutions due to differences in digital capacity and staff competence (Kemendikbudristek, 2021).

Figure 2 illustrates the conceptual relationship between IQAS and EQAS in the Indonesian higher education quality assurance ecosystem. The diagram shows that IQAS operates as an internal feedback loop that continuously informs EQAS, while EQAS provides external validation and benchmarking that feed back into institutional reform.

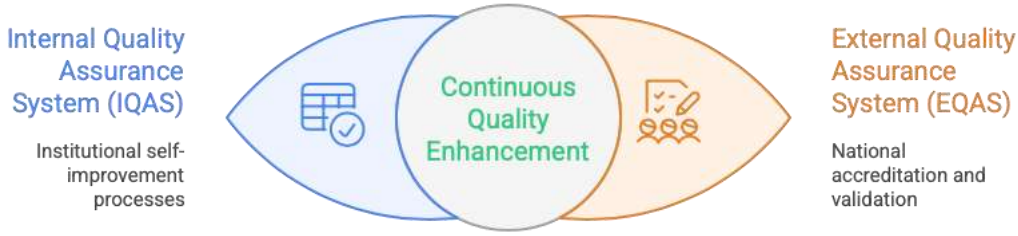


Figure 2. *Conceptual model of the IQAS–EQAS relationship in Indonesian higher education*

The relationship is cyclical and mutually reinforcing, aligning with the continuous improvement paradigm outlined by Goetsch and Davis (2014). However, this ideal model is often hindered by inconsistencies in implementation and the absence of interoperability between institutional and national quality databases. Universities with strong digital infrastructures tend to exhibit more effective integration, whereas others remain reliant on manual documentation, which reduces the timeliness and reliability of quality data (Kemendikbudristek, 2021).

4. Organizational Culture and Leadership Commitment

The effectiveness of IQAS and EQAS is deeply influenced by organizational culture and leadership. Empirical evidence suggests that institutions with strong leadership commitment demonstrate higher levels of quality compliance, transparency, and accountability (Hudaya et al., 2025). Quality assurance in these institutions is institutionalized as part of strategic governance, with leaders acting as *champions of quality* who ensure alignment between institutional goals and quality standards. Goetsch and Davis (2014) emphasize that leadership plays a critical role in shaping quality-oriented behaviors and creating an environment conducive to continuous improvement.

Conversely, a lack of leadership commitment and institutional awareness often leads to fragmented and reactive quality assurance practices. LLDIKTI (2021) reports that in several smaller private universities, the absence of a clear quality vision from top management has led to the perception of IQAS as an administrative burden rather than a strategic asset. This cultural resistance is further compounded by limited professional development opportunities for quality assurance staff, resulting in poor data interpretation and ineffective follow-up actions. Similar trends have been observed in other developing contexts, where the internalization of quality culture remains a gradual and resource-dependent process (Altbach & Salmi, 2011).

5. Challenges and Capacity Gaps

The synthesis of findings reveals several persistent barriers that hinder the full realization of IQAS–EQAS synergy. First, resource limitations—both financial and human—remain a major constraint. Many institutions lack certified internal auditors or staff trained in quality management methodologies, resulting in incomplete or inconsistent audit outcomes (LLDIKTI, 2021). Second, the predominance of paper-based documentation continues to impede efficiency and transparency. As emphasized by Ditjen Dikti (2019), transitioning from a *paper-based* to a *performance-based* quality culture is essential for improving

accountability and reducing administrative redundancy. Third, regulatory instability, marked by frequent revisions to accreditation instruments and performance indicators, often creates confusion among institutions struggling to align with evolving standards (Permendikbudristek, 2023).

Table 2 presents a synthesis of key implementation challenges and their corresponding institutional implications, derived from the reviewed literature.

Table 2. *Major challenges in implementing IQAS and EQAS in Indonesian higher education*

Challenge	Description	Institutional Implications
Leadership commitment	Limited involvement of institutional leaders in driving quality culture	Weak institutional accountability and fragmented quality strategies
Human resource capacity	Lack of certified auditors and qualified quality assurance personnel	Superficial internal audits and minimal data utilization
Funding and infrastructure	Inadequate budget for audits, training, and digital systems	Inefficient monitoring and limited adoption of digital platforms
Cultural resistance	Staff perceive quality assurance as bureaucratic	Low engagement and compliance with quality standards
Regulatory shifts	Frequent policy changes and new accreditation frameworks	Confusion in aligning internal systems with national standards

These findings corroborate previous analyses by Sallis (2012) and Gaspersz (2007), who noted that quality assurance systems often fail when they are treated as static regulatory tools rather than adaptive learning mechanisms. The institutionalization of a quality culture requires long-term investment, consistent leadership engagement, and data-driven decision-making processes.

6. Best Practices and Emerging Trends

Despite the challenges, several best practices have emerged from leading Indonesian universities that successfully integrate IQAS and EQAS into their governance frameworks. The use of digital quality information systems (*Sistem Informasi Mutu Perguruan Tinggi* or SIM-Mutu) has significantly improved data accessibility, audit accuracy, and transparency (Kemendikbudristek, 2021). ITS (2024), for example, employs a centralized MIS-based quality dashboard that tracks performance indicators across all academic and administrative units. This approach supports evidence-based decision-making and reduces redundancy between internal and external reporting.

In addition, the adoption of risk-based quality assurance has proven effective in optimizing limited institutional resources. According to Kumparan Edu (2023), this model prioritizes high-risk areas—such as curriculum relevance, graduate employability, and research productivity—allowing institutions to concentrate improvement efforts on domains with the greatest potential impact. Such practices mirror global trends toward *adaptive quality management*, where flexibility and responsiveness are integrated into quality frameworks to cope with uncertainty and rapid policy change (Harvey & Newton, 2007).

The increasing emphasis on collaborative benchmarking also signals a shift toward inter-institutional learning and peer evaluation. Ditjen Dikti (2019) encourages universities to engage in mutual audits and joint capacity-building initiatives to share successful strategies and standardize best practices.

This approach aligns with the notion of "learning organizations" promoted by Senge (1990), in which institutions evolve collectively through reflection, feedback, and collaboration.

Overall, the results underscore that the maturity of quality assurance systems in Indonesian higher education is contingent upon three interrelated dimensions: institutional capacity, cultural commitment, and system integration. While IQAS and EQAS were initially conceptualized as complementary systems, their full potential can only be realized when both operate synergistically within a digitalized, risk-sensitive, and improvement-oriented framework. Such integration ensures that quality assurance transcends procedural compliance and becomes a driver of institutional transformation, excellence, and sustainability in the competitive landscape of global higher education.

Discussion

The results of this study underscore the complex interplay between the Internal Quality Assurance System (IQAS) and the External Quality Assurance System (EQAS) in Indonesian higher education. As demonstrated in Figure 2 and Table 2, both systems operate under the same regulatory and philosophical framework but are differentiated by their scope, authority, and mechanisms of operation. The discussion that follows contextualizes these findings within existing global and national literature, elaborating on how quality assurance in higher education evolves as an adaptive governance process shaped by institutional culture, leadership engagement, and systemic integration.

A central argument emerging from this research is that IQAS and EQAS must be understood not as isolated bureaucratic mechanisms but as integral components of a unified ecosystem of continuous quality improvement. This perspective aligns with the theoretical models proposed by Deming (1986) through the PDCA (Plan–Do–Check–Act) cycle and Sallis (2012), who emphasized that quality in education is a holistic and participatory process involving all members of an academic institution. In this regard, IQAS provides the internal "engine" for quality enhancement, while EQAS serves as the external "mirror" for institutional validation and accountability (Harvey & Newton, 2007). The internal system cultivates self-reflection and improvement, whereas the external system ensures transparency and legitimacy in the eyes of stakeholders. However, as evidenced in the Indonesian context, these systems often fail to operate synergistically due to structural fragmentation, leadership inertia, and resource asymmetries among institutions (LLDIKTI, 2021; Hudaya, Isnaningrum, & Suhendra, 2025).

The discussion of this disjunction requires situating Indonesian higher education within the broader global discourse on quality assurance. Internationally, the convergence between internal and external quality assurance has been highlighted as a key condition for achieving institutional autonomy balanced with public accountability (Altbach & Salmi, 2011). In mature systems such as those of the United Kingdom, Australia, and the European Higher Education Area (EHEA), internal quality assurance frameworks are designed to feed directly into external accreditation and evaluation cycles. The Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), for

instance, emphasize that external quality reviews should rely on robust internal quality evidence and processes, rather than impose parallel structures (ENQA, 2015). Indonesia's regulatory framework, as articulated through Law No. 12 of 2012 and Permenristekdikti No. 62 of 2016, aligns normatively with this principle, yet in practice, the integration remains incomplete. The findings in Figure 2 illustrate that the feedback loop between IQAS and EQAS—while conceptually strong—has not been fully operationalized, partly due to inconsistent data management systems and a lack of cross-agency coordination (Ditjen Dikti, 2018; Kemendikbudristek, 2021).

Leadership emerges as a decisive factor in determining whether quality assurance functions as a transformative or merely procedural mechanism. Goetsch and Davis (2014) assert that leadership commitment is the cornerstone of Total Quality Management (TQM), as leaders set the tone for institutional culture and resource allocation. In Indonesian universities, particularly public ones with autonomous legal status (PTNBH), leadership that prioritizes quality culture has resulted in tangible improvements in governance and academic outcomes (ITS, 2024). Conversely, many smaller private institutions exhibit what LLDIKTI (2021) terms "reactive compliance," where quality assurance is conducted post hoc—mainly to fulfill accreditation requirements. This observation corresponds with Harvey and Newton's (2007) critique that externally driven quality regimes often reduce innovation and reinforce a culture of compliance rather than improvement. The challenge, therefore, lies in transforming leadership paradigms from control-oriented to improvement-oriented, where quality assurance is embedded as a strategic institutional value rather than an external imposition.

Institutional culture also plays a pivotal role in mediating the effectiveness of IQAS and EQAS. As demonstrated in Table 2, cultural resistance remains one of the most persistent barriers to implementing meaningful quality assurance practices. Many staff and faculty members continue to perceive quality processes as administrative burdens rather than developmental opportunities (Hudaya et al., 2025). This mindset mirrors the "paper-based quality" phenomenon described by Ditjen Dikti (2019), where documentation overshadows substance. The transition to a performance-based quality culture requires institutional learning and trust-building processes that engage all stakeholders—leaders, faculty, students, and external partners—in shared responsibility for improvement. In this sense, Senge's (1990) concept of the "learning organization" provides a useful framework for understanding how universities can evolve collectively by transforming compliance into reflection, and reflection into innovation.

The influence of resources and capacity on quality assurance implementation cannot be overstated. As Table 2 indicates, disparities in human resources, financial support, and infrastructure contribute significantly to the uneven quality landscape across Indonesian universities. Institutions with adequate funding and trained internal auditors—such as major public universities—demonstrate higher degrees of IQAS maturity, often supported by digital management systems (Kumparan Edu, 2023; ITS, 2024). Meanwhile, under-resourced institutions remain reliant on manual processes, limiting their ability to

conduct systematic monitoring or follow-up evaluation (LLDIKTI, 2021). This pattern reflects what Altbach and Salmi (2011) describe as the "stratification of quality," where elite universities advance toward world-class standards while others struggle to meet minimum requirements. To mitigate this divide, policy interventions should prioritize capacity building, mentoring, and digital transformation in quality assurance practices.

The adoption of digital and risk-based quality assurance frameworks represents a major evolution in the operationalization of IQAS and EQAS. The findings corroborate the assertion by Kemendikbudristek (2021) that Management Information Systems (MIS) and Sistem Informasi Mutu Perguruan Tinggi (SIM-Mutu) have become instrumental in ensuring transparency and evidence-based decision-making. By digitizing audit processes, universities can not only reduce bureaucratic load but also improve data reliability and accessibility. The risk-based approach, as implemented by institutions such as ITS and UGM, enhances efficiency by focusing quality assurance resources on high-risk domains, such as curriculum relevance, research productivity, and stakeholder satisfaction (Kumparan Edu, 2023). This shift parallels global trends toward proportionate regulation, where evaluation intensity is aligned with institutional performance and risk profiles (Harvey & Newton, 2007). Such an approach not only strengthens accountability but also incentivizes innovation, as institutions are empowered to manage their quality strategies adaptively.

Furthermore, the discussion must address the policy dimension of quality assurance reform. Frequent revisions of accreditation frameworks—such as those introduced in Permendikbudristek No. 53 of 2023—have created both opportunities and challenges for institutional adaptation. On one hand, these reforms modernize accreditation by emphasizing outcome-based and data-driven evaluations. On the other hand, they demand rapid institutional adjustments in documentation, indicators, and evaluation metrics, which smaller universities may find difficult to accommodate. Ditjen Dikti (2019) has noted that this "policy dynamism" often results in reform fatigue and inconsistency in quality reporting. Aligning internal systems with such evolving standards requires a flexible yet robust governance structure that can adapt to regulatory changes without compromising the integrity of institutional data or strategic planning.

Inter-institutional collaboration and benchmarking emerge as promising mechanisms to strengthen IQAS–EQAS synergy. The study's results support Ditjen Dikti's (2019) recommendation that universities engage in peer review networks and joint quality enhancement projects to share best practices and collectively raise standards. This collaborative approach aligns with Harvey and Green's (1993) dimension of quality as transformation, in which improvement arises through dialogue, feedback, and shared learning rather than hierarchical enforcement. Regional quality consortia—such as those supported by LLDIKTI—illustrate the potential of collective benchmarking to reduce disparities between institutions and promote mutual accountability. Moreover, as universities collaborate on quality

initiatives, they contribute to the development of a national quality community, a term coined by Altbach and Salmi (2011) to describe the shared ethos that underpins sustainable academic excellence.

The conceptual alignment between IQAS and EQAS also reflects broader shifts in higher education governance from input-based to outcome-based paradigms. Gaspersz (2007) and Tjiptono and Diana (2016) emphasize that quality must ultimately be measured by value creation—how institutions transform inputs (resources, students, and policies) into meaningful outcomes such as employability, innovation, and societal impact. In this light, EQAS should not be limited to verifying compliance but should function as a catalyst that validates and amplifies the results of internal improvement efforts. Figure 2 exemplifies this cyclical relationship, where external evaluation feeds back into internal reform, creating a continuous quality loop. However, achieving this loop requires a shared understanding between accrediting bodies and institutions that quality assurance is developmental rather than punitive.

Finally, the Indonesian experience highlights the importance of contextualizing international quality assurance models within local realities. While frameworks such as the ESG or ABET standards provide valuable benchmarks, their direct adoption without cultural adaptation may lead to superficial compliance rather than substantive improvement (Harvey & Newton, 2007). The unique sociocultural context of Indonesian higher education—characterized by diverse institutional capacities, governance structures, and stakeholder expectations—demands a tailored approach that integrates global principles with national identity and priorities. In this regard, the continuous evolution of SPM Dikti represents an ongoing experiment in balancing autonomy and accountability, standardization and diversity, and regulation and innovation.

Taken together, the discussion reaffirms that the effectiveness of IQAS and EQAS lies not in their procedural completeness but in their capacity to stimulate reflective learning, strategic adaptation, and a culture of evidence-based improvement. The movement toward digitalization, risk-based management, and collaborative benchmarking signals a maturing quality assurance system that is gradually shifting from control to empowerment. This evolution, while uneven, suggests that Indonesian higher education is progressively internalizing the global discourse of quality assurance within its national policy architecture, positioning itself to meet the challenges of global competitiveness and institutional sustainability.

CONCLUSIONS

This study highlights that the effectiveness of quality assurance in Indonesian higher education depends on the synergistic relationship between the Internal Quality Assurance System (IQAS) and the External Quality Assurance System (EQAS). The findings reveal that IQAS serves as an institutional mechanism for self-regulation and continuous improvement through the PPEPP cycle, while EQAS functions as an external validation system ensuring accountability and credibility through accreditation by BAN-PT and LAM. However, their implementation remains uneven due to disparities in institutional

capacity, leadership commitment, and digital infrastructure. The results also show that the lack of integration between internal and external data systems has hindered the establishment of a coherent, evidence-based quality assurance ecosystem.

The discussion underscores that institutional leadership, culture, and resources are decisive in determining whether quality assurance becomes transformative or remains bureaucratic. Digitalization and risk-based approaches have emerged as effective strategies for improving transparency, efficiency, and responsiveness, aligning Indonesia's quality assurance practices with global standards of continuous improvement. The study contributes to the existing body of knowledge by synthesizing regulatory, conceptual, and empirical insights into a unified framework that illustrates how IQAS and EQAS can operate as mutually reinforcing mechanisms within higher education governance.

Theoretically, this research advances understanding of quality assurance as a systemic process rooted in institutional learning, while practically it offers policy recommendations for integrating digital systems, enhancing leadership capacity, and fostering inter-institutional collaboration. Future studies are encouraged to conduct empirical assessments of the proposed IQAS–EQAS integration model across diverse institutional contexts to evaluate its impact on performance outcomes, stakeholder satisfaction, and long-term sustainability.

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